

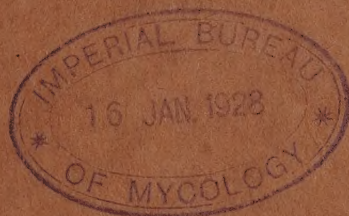
COLONY OF MAURITIUS

ANNUAL REPORT

ON THE

DEPARTMENT OF AGRICULTURE

FOR THE YEAR 1926



PORT LOUIS

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No. Rae 1547
16/27

THE HONOURABLE THE COLONIAL SECRETARY.

I have the honour to submit the report on the Department of Agriculture and on the agricultural conditions in the Colony for the year 1926.

PART I

AGRICULTURAL CONDITIONS IN 1926

The weather conditions experienced during the growing and harvesting seasons are summarised in the annexed tabular statement:—

<i>Month and year</i>	<i>Temperature</i>		<i>Rainfall</i>
1925			
November	... Normal	...	... Above Normal
December	... Normal	...	... Above Normal
1926			
January	... Markedly above normal	...	... Normal
February	... Above Normal	...	... Considerably below Normal
March	... Above Normal	...	... Considerably below Normal
April	... Above Normal	...	... Considerably above Normal
May...	... Normal	...	... Above Normal
June	... Markedly above Normal	...	... Normal
July	... Considerably above Normal	...	... Considerably above Normal
August	... Considerably above Normal	...	... Considerably above Normal
September	... Considerably above Normal	...	... Considerably below Normal
October	... Slightly above Normal	...	... Below Normal
November	... Normal	...	... Very Considerably above Normal
December	... Normal	...	... Considerably above Normal

As will be seen from the above summary, weather conditions were, during the year, very abnormal. Cyclonic activity was little in evidence during the summer months, thereby entailing a pronounced shortage of rain. On the other hand, a cyclone occurred late in April and its centre passed close eastward of the Island on the 19th.

Although the strength of the wind was not very great the damage done was, in view of the lateness of the season, very considerable.

Furthermore, the winter season was characterised by abnormally high temperatures with heavy rainfall; as a result, the sucrose content of the cane remained very low and the total production of sugar considerably below expectation.

SUGAR INDUSTRY

The preliminary compilation of factory results for the 1926 crop gave a total of 196 thousand metric tons. The total tonnage of cane ground approximated to 2 millions. Before the cyclone of April 19th, a total turn out of 245 thousand tons could reasonably be anticipated, so that the total reduction is of the order of 20%. It should be added that, with normal weather during the grinding season, the sucrose content of the cane would have been markedly higher and, had the moderate extraction figure of 10.5% of cane been obtained, the actual production would have been about 14 thousand tons larger.

The following figures give the results, for each district, of the preliminary compilation of factory returns, compared with the production of the seven preceding years.

Sugar production in thousand metric tons

District	1926 Preliminary results	1925	1924	1923	1922	1921	1920	1919
Pamplemousses & Riv. du Rempart	44.6	51.86	47.48	42.27	54.93	48.43	59.16	50.63
Flacq	26.3	43.06	39.06	35.51	39.56	33.77	45.35	36.86
Moka	31.0	34.68	30.73	31.34	29.39	28.04	37.58	35.24
Plaines Wilhems	17.7	18.18	18.79	15.01	20.95	14.54	21.36	19.38
Black River	7.2	8.66	8.47	7.17	8.65	6.15	7.57	6.54
Savanne	31.6	39.72	38.10	33.64	35.38	31.71	41.55	43.33
Grand Port	37.6	45.06	42.08	36.61	42.33	34.78	47.30	43.21
Total	196.0	241.22	224.71	201.55	231.19	197.42	259.87	235.19

Yield of Vesou Sugars.—Of the estimated total of 196 thousand tons, 98% will, it is anticipated, consist of vesou sugars, while low sugars will approximately reach 2% of the total. The following table exhibits the progress in this connection for the past ten years :

Year	%Vesou	Year	%Vesou
1917	89.85	1922	97.20
1918	94.50	1923	97.61
1919	94.45	1924	98.34
1920	95.46	1925	98.21
1921	95.98	1926	98.0 (estimated)

During the year, owing to market conditions, many factories strove to produce a proportion of particularly high grade of vesou sugars, locally termed "extra fine." The market advantage of this type of sugar has been about Rs. 0.80 per 50 kilos.

BLE II *Factory work in 1926*—Owing to exceptionally unfavourable weather during the maturing season, the sucrose content of the cane was very low. The average extraction figure for the whole Island is estimated at 10.02. Results for the previous decade are as follows:—

Year	Commercial sugar extracted % cane	Commercial sugar extracted % sugar in cane
1917	10.62	79.5
1918	10.95	80.4
1919	10.42	80.7
1920	10.76	..
1921	9.90	79.7
1922	10.58	...
1923	10.51	79.6
1924	10.28	79.7
1925	10.56	80.1
1926	10.02 (Estimated)	79.5

As compared with other countries the extraction of commercial sugar per cent cane is on the low side thus for the years 1920 to 1926 in Java the mean extraction of commercial sugar per cent cane was 10.74 and the mean extraction of commercial sugar per centage of sugar in cane was 83.0, while in Hawaii for the period 1907-24 the figures were 11.71 commercial sugar extracted per cent cane 89.5 commercial sugar extracted per cent cane. It should however be added that in Hawaii the type of sugar made is refining crystals.

Factories conditions in 1926—The tendency towards centralisation has continued. One factory, Etoile, was closed during the year. The total number of factories at the end of 1926 was thus forty four as compared with fifty-three at the end of 1916.

New sugar machinery to the value of Rs. 1,143,500 was imported during the year, and tramway material to the value of 333,000 rupees.

In relation to new processes it may be mentioned that the Roussel process introduced into one factory during the 1925 crop was operated throughout the year with very satisfactory results in spite of the bad quality of the cane. This process consists essentially in the filtration of the whole of the defecated juice without previous settling. Peck strainers were installed in three factories and gave fair results although some trouble was experienced in some cases. Lafeuille crystallizers were installed in two factories in Moka but have not so far given very satisfactory results, owing to mechanical difficulties in relation to the installation. It is proposed to endeavour to remedy these defects when it is hoped that more satisfactory results will be obtained. Quick running vacuum pumps with evaporators and pans have already been installed in two factories and are giving satisfactory results. The first installation was made on the advice of the Sugar Technologist of the

Department of Agriculture. Further orders for similar pumps have been placed for next year. Trouble was experienced in many factories owing to difficulties consequent on the impure juices which occurred as the result of the unfavourable ripening season. An interesting new phenomenon was the development which was noticed in several factories of masses of gummy substances owing to the rapid growth of micro-organisms resembling *Leuconostoc*. An examination of this organism by the Sugar Technologist and the Bacteriological Laboratory showed however that it was not *leuconostoc* but an organism which apparently had not previously been recorded and which was probably introduced from the soil.

It may be added that the Sugar Technology service of the Department inaugurated three years ago in connection with the College of Agriculture continues to meet with increasing appreciation from planters and the services of the Sugar Technologist have been in constant requisition to advise on matters in connection with the manufacture of sugar. It is hoped that it may be possible to provide for the strengthening of this branch of the Agricultural Department by the inclusion on the staff of an additional assistant with special training in mechanical engineering as applied to the Sugar Industry.

Area under cultivation.—At the end of 1925, the area under cane cultivation approximated to 156,700 arpents (163,497 acres) the decrease on the 1924 figure being about 3,500 arpents. No figures for 1926 are as yet available but it is anticipated that no great changes will be in evidence during the year.

Indian Cultivation.—At the end of 1925, the area cultivated in cane by Indian planters approximated to 69,500 arpents (72,531 acres) or 44.4% of the total cane cultivation. Although the proportion of Indian cane to total cane is practically the same as in 1924, the actual acreage cultivated by Indians evinces a reduction of about 3,700 acres owing to the unfavourable market conditions which obtained for sugar during the year 1925.

Disposal of the sugar crop.—The sugar Planter's Syndicate continued operations during the year, controlling more than 80% of the total production of the Colony. The final average price per 50 kilos for 1925 was Rs. 8.90. In 1926, the corresponding figure can only be given in first approximation: it is Rs. 10.05 net per 50 kilos.

As during the two previous years, the bulk of the local sugar production went to the United Kingdom. Figures for the 1925–26 exportation year are as follows: Total export, 231,338 tons, Export to United Kingdom, 223,991 tons. In the year 1926–27 the figures up to December 31st 1926, indicate a total exportation of 82,364 tons of which 77,154 went to the United Kingdom.

Instrumental Cultivation.—Continued progress in this respect is noted. Tractors and ploughs, to the value of Rs. 67,000, were imported into the Colony during the year.

There are now 117 tractors in operation in the Colony, of these 103 are Cletrac, 4 are Renault, 2 are Aras, 1 Bosch, 3 Case, 1 Sanderson, 1 Austin, and 2 Fordson. The Cletrac tractor has to a large extent captured the local market, both the large and small models, being extensively employed. Satisfactory results are also reported from Renault tractors which by their weight and great pulling capacity are particularly well adapted for work on rather rough lands, while planters have also reported satisfactory results from the heavy wheeled tractors of the Case and Sanderson types. There is no doubt that wheeled tractors possess a great advantage, inasmuch as caterpillar tracks are liable to breakage and the repair bill is much less for the wheeled type tractor in consequence. The Austin tractor in use at the Department of Agriculture has given good results during the past five years, it is too light for use with disc ploughs though it does well with two furrow ploughs of mouldboard type.

That the Cletrac has to such a large extent captured the market is because the firm representing this machine took very great trouble in the early days to demonstrate its value and to organise an efficient service of information and practical assistance combined with carrying ample stocks of spare parts for their customers. The business enterprise of American manufacturers in this way is responsible for the popularity of both this type of tractor and also of American ploughs and implements. There has been large expenditure on agricultural implements of this description during the past years which has gone very largely to American firms. In Mauritius at any rate the first requisite for sale is the establishment of efficient service, in its absence there is little prospect of any change in the position. The type of tractor required for Mauritius is of robust description capable of withstanding rather rough field conditions.

The small type of light tractors such as the Beeman and the Service have been found too light for local conditions and have now been discarded.

The position in relation to the type of implement used has not markedly changed in the past two years; popular favour still attaches to the disc plough for uprooting canes and preparing land, while there is some tendency towards the employment of disc plough with a larger number of discs, than formerly; mouldboard ploughs are not in favour mainly as owing to the stony nature of the land, the shares particularly are liable to injury. On the other hand in the experience of the Department of Agriculture mouldboard ploughs are

perhaps safer to use because it is easier to regulate the depth of ploughing. The subsoil of Mauritius is extremely infertile and if in ploughing, any considerable amount of subsoil is mixed with the top soil great loss of fertility results; it is probable that in some cases the use of the disc plough may have had the effect of reducing the yields by going too deep.

In relation to furrowing the large type of double mouldboard plough with extension pieces to the mouldboard continues to hold the field; the most popular mark probably being the Oliver although the Avery's and the German Rud Sack ploughs are also used on a number of estates. The only English ploughs used to any extent are those manufactured by Messrs. Ransomes, Sims and Jefferies which are employed on some estates but are considerably outnumbered by American and German ploughs. As was anticipated the demand for a plough making a square sided furrow has to a considerable extent diminished as planters are realising that a V shaped furrow with a wide base gives quite satisfactory results.

In relation to cultivators various imported types are gaining in favour although many sugar estates still employ the simple heavy form of cultivator locally known as the Daniel which is made without much difficulty in the workshops attached to sugar factories.

So far the use of mechanical devices for the application of fertilisers and the planting of cane has not attained any extension but there does not appear to be any reason why in the future such devices could not be successfully employed.

Irrigation of sugar cane.—Steady progress was maintained during the year on the constructional works in relation to the second Irrigation Scheme of La Nicolière-Midlands. The La Nicolière reservoir was completed during the year and deliveries of water therefrom on a limited scale commenced. Good progress continues to be made in relation to the construction of the larger reservoir at Midlands. In relation to the La Ferme reservoir, considerable complaints were received owing to the failure of water from the reservoir in July, 1925 and a petition was presented to Government by planters in the Black River District asking for assistance. In order to provide a larger quantity of water for this reservoir in future years and to ensure against recurrence of such shortages, important works were undertaken by Government in the diversion of the head waters of the Rivière du Poste into the Mare aux Vacoas reservoir the surplus of which can be utilised to supply La Ferme.

As a result of representations made, a special committee was appointed by the Governor to report on conditions in relation to Irrigation in Black River in June, 1926. This Committee recommended that in view of the difficulties which planters of Black River had experienced, a temporary reduction in the rates charged for water deliveries should be made. The question of the manner in which water is utilised by planters was made the subject of a special report to the Government during the year by the Director of Agriculture; it transpires that methods in use are in some cases uneconomical. The report on the Government Irrigation Station at Medine issued during the year showed clearly that by paying attention to the methods by which water is applied to fields considerable economies were capable of being effected. In order to improve irrigation methods, the Government have under consideration at the present moment a proposal for the appointment of a special instructional officer in connection with the irrigation methods whose services would be at the disposal of planters possessing irrigated properties. It is proposed to despatch the officer selected to Hawaii for the purpose of studying irrigation methods in relation to canes as used in that country, inasmuch as such methods have there attained greater perfection than anywhere else. With the large sums of money at present being embarked in irrigation schemes by the Colonial Government it is clear that for the maximum benefit to be derived therefrom efficient methods of the application of water to lands are essential. It appears reasonably clear in the light of investigations that given satisfactory methods of utilising the water, returns can be looked for under irrigated conditions comparable to those in Hawaii but for this to be achieved some modifications in methods of applying water are essential.

Pests and diseases of the sugar cane.—The principal matter to record in connection with the pests and diseases of sugar cane is the spread of *Phytalus Smithi* in the districts of Moka and Flacq. The occurrence of this pest was first reported on a considerable scale in 1924 and investigations in subsequent years have shown that the contaminated area was very much larger than was originally thought. The existence of this infection has necessitated further organisation on a large scale and the appointment of a supervising officer to deal with the infection in this area. There is unfortunately ground for believing that in one particular case, the original infection may have been due to malicious dissemination. A further small area of infection was also detected at Sebastopol in Flacq and at Phoenix in Plaines Wilhems while a new infestation was also found at New Grove in Grand Port. To assist in the control of the pest a special Advisory Committee has been appointed with the Director of Agriculture as Chairman. Among additional work, the regular inspection of all uninfected areas with a view to the early detection of fresh centres is being undertaken. It is clear that with the multiplication of centres of infection and with the very considerable traffic which takes place over the roads of the Island and also by the Railway considerable facilities now exist for the spread of the pest and it is to be feared that it may be but a question of time for practically the

whole Island to become infected with these insects. On the other hand operations in the Pamplemousses district and also in Grand Port have shown that by systematic application of the methods hitherto in force combined with the dissemination of the parasitic wasp (*Tiphia paralella*) a complete control can in course of time be established as shown by the fact that the central area in Pamplemousses district which was the original focus of infection is now practically free from the pest. Various new methods have continued to be experimented with for the control of the insect including the application of Paradichlor and Calcium Cyanide but unfortunately these have also given negative results in relation to *Phytalus*. It is however to be remarked that experiments with the "Gros Moutou" (*Oryctes tarandus*) which is a serious pest to cane in certain districts show that Calcium Cyanide may have a useful application in relation thereto. Sporadic attacks of *Lachnosterna* (*Rhizotrogus pallens*) and attacks of the moth borer of some importance were recorded on a number of estates, while outbreaks of locust were also recorded on two estates.

In relation to fungoid diseases, gumming disease was again found widespread throughout the Island but not usually to a serious extent. Pine apple disease was a frequent cause of destruction of cane cuttings. Red rot was found on nine estates usually not in a serious form. Streak disease was found largely on different estates but it is by no means clear as yet to what extent damage may be attributed to it; progress in this direction is being closely followed. Root disease was reported on five estates. The position in relation to this malady remains obscure, but in all cases so far examinations have shown that it appears to be associated with unfavourable cultural conditions.

The Plant Inspection service in relation to cane diseases was maintained throughout the year and 108 visits of inspections were paid. The institution of this service has enabled a much more close supervision to be obtained of disease conditions than formerly existed.

Investigations in relation to the Sugar Industry.—The ordinary investigations carried out by the Department of Agriculture have been continued comprising field trials, cultivation, manuring and irrigation of cane. As previously noted the report on the investigations carried out in relation to the irrigation of cane was published during the year. The main conclusions of these investigations summarised at the end of this report are reproduced below:—

Summary of Conclusions regarding Irrigation of canes.

"1. The rainfall in Black River amounts in average to 32 inches p.a. but only about 60 per cent can be regarded as effective. The majority of the precipitation occurs between January and April but it is fallacious to assume that irrigation can be entirely dispensed with during these months.

"2. The quality of the irrigation water from La Ferme is thoroughly satisfactory.

"3. For effective irrigation great attention must be paid to systems and methods, the most satisfactory system at present devised is the Hawaiian furrow system which comprises planting in continuous level furrows and irrigation over short lengths from laterals.

"4. For every field under particular conditions, there is a definite minimum quantity of water capable of being applied to it. This minimum will depend on the character of the soil and the manner in which the field is laid out and the water applied.

"5. In applying water to a field it is most economical to work with relatively large heads as this lessens absorption, while there is little risk of loss by wash if application in level furrows is resorted to.

"6. There is nothing to be gained by irrigating canes to a greater depth than the minimum. Quantities of water applied in excess of the minimum are lost to the plant.

"7. The intervals between irrigation profoundly affects growth. During the period of most active growth weekly irrigation gives markedly the best results and lengthening the intervals between irrigation leads to diminished yields.

"8. The season of planting affects returns as virgins very profoundly and to a less extent subsequent ratoons; the best season for planting in Black River is from May to August.

"9. The growth of the cane is at its maximum between January and May, during this period 74% of the crop is produced, consequently it is between these months that the demand of the cane for water is at its maximum.

"10. Soil moisture at Médine after irrigation rises to 28.6 per cent. In the cool months it falls to about 18 per cent in 20 days, consequently when cane growth is at its minimum irrigation may be reduced to once every three weeks without damaging the crop.

"11. From a study of the results, schemes for watering of plant canes and ratoon canes have been drawn up. Given economical and soundly devised systems of application, it appears that Mr. Harriott's original estimates of the duty of water in Black River were about 10 per cent too low. His estimates of the probable yield of canes were approximately correct.

"12. Surface cultivation of virgin canes until the period when the plants cover over is shown to be remunerative. Surface cultivation of ratoon canes in which the straw has been left on the land does not pay. Deep cultivation of the interlines of ratoon canes is remunerative.

"13. On lands which have not been cultivated for long periods applications of natural or artificial fertilizers, lime and molasses, are not remunerative.

"14. Certain cane varieties stand out as preeminently suited to irrigation conditions.

"15. The best results in relation to the arrest of water before reaping appear to be obtained when water is stopped about 30 days before the harvest.

The main results achieved in relation to experiments with cane varieties, manuring canes, cultivating canes and some other minor points were prepared for publication towards the end of the year. In relation to the manuring of canes some results of importance have been recorded, the chief among these being the fact that nitrogenous artificial manures specially when applied to virgin canes may frequently be unproductive of commensurate increase in yield, owing to the natural high fertility of the soil and the current practice of manuring heavily with pen manure (Fumier) and factory residues. It also appears that the common practice of dividing the doses of artificial manures may not be as beneficial as is ordinarily supposed. Laboratory investigations have shown that nitrogenous manures when applied to lands already rich in Nitrogen tend to have their nitrogen reverted to the organic form or else lost as gaseous nitrogen. Laboratory investigations have also shown that under these conditions Phosphoric acid specially when applied as Superphosphate may also become reverted to the organic form and made unavailable to the plant.

In relation to cultivation, it has been shown that thorough tillage by the plough may under suitable conditions produce considerable increases in yield but that great care is necessary to prevent ploughing being carried too deep as otherwise infertile subsoil may be brought to the surface which may lead to serious temporary loss of fertility. Previous observations in relation to molasses have been confirmed by subsequent experiments while it has further been shown that these increases are not seen when the natural fertility level of the land is very high. It seems not unlikely that in some cases the effect to be ascribed to Potash in molasses is higher than was at first thought.

Investigations in relation to the storage of fumier have been carried to a conclusion and indicate that losses in the storage of fumier may be greatly reduced by compaction and covering. The common practice of adding molasses to fumier greatly increases the speed of decomposition and the available plant food but also augments the loss of nitrogen, this may however be compensated for by the more rapid and by the more thorough manner in which the organic matter is disintegrated. Measurements in the rate of growth of cane were continued and brought to a conclusion. They demonstrate that throughout the Island the principal months of growth are January, February, March and April. Other investigations have comprised the commencement of a series of tests on the fuel value of various woods and of the calorific value of "bagasse" of different varieties of cane.

General Conditions in relation to the Sugar Industry.—The period of low prices which prevailed during the crop of 1925 and the earlier part of 1926 combined with the effects of the cyclone which occurred on April 19th 1925 have caused the sugar industry to pass through a period of severe crisis. After the cyclone, representations were made to the Government asking that assistance might be afforded to the sugar industry by means of a loan. After considerable discussion the proposal was acceded to by the Government and arrangements made to finance a loan of 5,000,000 rupees to be distributed as an export bonus on the sugar of 1926 crop and be repaid by instalments recovered by means of a special export tax to be imposed in subsequent years. Following on these proposals the Government put forward a suggestion that a conference of sugar producers should take place in 1927, with a view to discussing the economic situation of the industry. Towards the end of the year the absorption of the greater part of the visible surplus of the world's sugar stock combined with the policy of restriction of output instituted by the Cuban Government had exercised sufficient effect on market conditions to improve materially the position, and in consequence the outlook may now be said to be more hopeful.

SUBSIDIARY AGRICULTURAL INDUSTRIES

As the result of the depression which has ruled in the sugar industry during the past two years greatly increased attention has been devoted to the question of fostering the development of subsidiary industries. Government policy has consistently favoured these efforts and encouragement and assistance have been forthcoming wherever they could usefully be given. It is believed that by the encouragement of private efforts there are greater chances of success than by Government demonstrations on a large scale. So far the industries which have shown marked progress are the fibre industry, the tobacco industry, the production of industrial alcohol and the production of vegetable oils, while towards the end of the year definite proposals came into being for the development of a fruit preserving and canning industry. It seems not unlikely that to this list can ultimately be added the cultivation of vanilla, coffee and the production of essential oils.

Mauritius Hemp.—Quotations for prime were in the neighbourhood Rs. 415 during the first weeks of 1926 but declined steadily to Rs. 320 by the end of the year.

The export for the past ten years has been as follows :—

<i>Year</i>	<i>Bales</i>	<i>Year</i>	<i>Bales</i>
1917	5,647	1922	3,120
1918	1,974	1923	2,400
1919	10,139	1924	4,987
1920	3,500	1925	8,633
1921	1,150	1926	11,477

There are four bales to the metric ton.

The outstanding event of importance during the year was the organisation of the Mauritius Hemp Syndicate following the lines indicated in the report for 1925. This Syndicate has for its object the standardisation of the produce of the Mauritius Hemp Industry together with the improvement of methods of packing and marketing. The Syndicate have received a grant of Rs. 100,000 from the Government and with this they are erecting a central Fibre Factory in Port Louis where it is intended that the crop of the Island will be graded and packed. As a continuation of the efforts made, the Syndicate during the year succeeded in establishing a series of standard grades and getting them accepted by fibre dealers in London.

The building for the syndicate's factories was unfortunately lost on the Cawdor Castle, which was wrecked in the middle of the year, and could not be replaced until December; in consequence the actual operations of the Syndicate have been delayed. It is hoped that ultimately the Syndicate may be able to achieve the co-operative marketing of the Mauritius fibre crop on the same lines as those of the Sugar Syndicate although a large measure of co-operation in this matter will not be achieved at the outset. In accordance with the agreement whereby a Government grant in aid to the Association was provided, the Director of Agriculture was nominated to represent the Government on the Board of the Syndicate. Sisal continue to be produced on a small scale in the Island but neither the Government Corona Fibre Machine nor the privately owned Robey Machine was operated. On the other hand, samples of sisal shipped by the Government were very highly reported on by the firm to whom they were consigned and it would appear that Mauritius is capable of producing sisal which can compare in quality with the best types of Kenya and Tanganyika sisals. It is unfortunate that in all the efforts to grow sisal in the Colony on a large scale, failure has so far resulted owing to insufficient attention to the natural requirements of the plant.

During the year, mainly through the initiative of Mr. Francis Lincoln, a well known fibre producer of Mauritius, experiments were made in England with a view to producing a fabric from Mauritius Hemp suitable for sugar bags, filter presses, &c. A considerable measure of success has attended the experiments and a new and important method of utilisation of the locally produced fibre seems possible as a result.

Tobacco.—Considerable development has taken place in relation to tobacco cultivation during the year. On my return from leave at the beginning of 1926 it was found that a considerable quantity of air cured yellow leaf had been produced both on the experimental plots of the Department and also by private growers and it was decided to attempt a commercial experiment as to whether this could be made into bright leaf cigarettes that would command a sale locally. This was accordingly cut at the Government Tobacco Factory made up into cigarettes and placed on the market under the name of DODO B. They immediately found a ready market and in a few weeks' time the whole supply was exhausted. The results were so satisfactory that permission was obtained for starting experiments on flue curing tobacco and authority given for the erection of a flue curing barn at Reduit. This was completed in July and at that time samples of both Blue tobacco and Constant were cured, and gave satisfactory flue cured leaf. Samples of flue cured, air cured and fire cured tobacco were submitted to Brokers for report with such encouraging results that the effort is now being made to organise an export trade. In May 1926 The British American Tobacco Company opened a factory in Port Louis and at the same time commenced independent experiments on the production of flue cured tobacco. For this purpose they imported the services of two experts who obtained results similar to those obtained by the Department of Agriculture. Thereafter the Department of Agriculture and the British American Tobacco Company working in cooperation have conducted a campaign in favour of tobacco cultivation and curing by the flue curing process. A special meeting of the Chamber of Agriculture was held in October at which the whole question of tobacco cultivation was discussed and explained and thereafter developments on a considerable scale commenced. By the end of the year flue curing barns had been erected on eight estates and a number of others were in course of erection.

To facilitate developments the Government repealed Ordinance No. 19 of 1890 which imposed a land tax of Rs. 160 per acre payable in advance on land cultivated in tobacco, and appointed additional staff to assist in advising growers. In October the area under cultivation of tobacco was approximately 500 acres, by the end of the year it is estimated that the area had increased to 800. The Government Tobacco Factory continued operations during the year and sold altogether some 6,000 kilos of tobacco.

Simultaneously local manufacturers extended operations while two new factories were opened. By the end of the year importations of Black tobacco from Bourbon had ceased the whole of this type of product which still comprises about 40 per cent of the tobacco smoked in the Colony being produced locally, thus fulfilling the object which Sir Hesketh Bell G.C.M.G. had in view ten years ago when the question of tobacco cultivation was first suggested by him.

In October the British American Tobacco Company commenced purchasing yellow leaf from planters but had not at the end of the year commenced the output of cigarettes made from local tobacco; it is however anticipated that this will shortly take place. The operations of this Company in manufacturing cigarettes from imported leaf necessitated a revision of the Customs Tariff in October in order to compensate for the loss in revenue to be anticipated by the change of position, while in order to provide for the ultimate contingent necessity of imposing an excise on locally produced tobacco a standing Committee consisting of the Receiver General, the Collector of Customs and the Director of Agriculture was appointed by His Excellency the Governor to watch and periodically report on the position, with a view ultimately to submitting the necessary recommendations for taxation. To cope with the extra work necessitated by these developments a separate Tobacco Division of the Department of Agriculture was inaugurated under the charge of Mr. Geoffrey Corbett, Agricultural Superintendent Rodrigues, seconded for the post after training, and temporary staff was allocated for this division. To provide for the means of continuing experiments and furnishing supplies of seed of satisfactory quality to growers an area of 20 acres was assigned to the Department of Agriculture at Beau Bassin on lands formerly occupied by the Poor Law Department. The services of the officers of the Tobacco Division have been in continuous requisition during the whole of the latter part of the year and at the time of writing the prospects of the development of the industry into one of considerable magnitude appear to be very bright indeed.

Alcohol.—The production of alcohol for the past ten years according to Treasury returns is as follows:—

1916-17	...	1,883,607 litres	1921-22	...	1,749,994 litres
1917-18	...	1,602,414 "	1922-23	...	496,237 "
1918-19	...	1,529,315 "	1923-24	...	523,892 "
1919-20	...	1,666,000 "	1924-25	...	638,196 "
1920-21	...	1,900,000 "	1925-26	...	490,113 "

Of the 1926 production 503,113 litres at 19° Cartier were intended for human consumption and 77,570 for use as denaturated and power alcohol.

The diminution in the official production of alcohol, consequent on the liquor laws promulgated in 1922 is, apparently, attended with a considerable clandestine production and, as a result, a Commission of enquiry was appointed by the Government with a view to investigating the advisability of remodeling the restrictions on alcohol production.

During the year, a new and up to date distillery annexed to the Sugar Factory at Médine started operations, while a smaller plant was erected at Richelieu. As a result, the price of denaturated alcohol, for domestic purposes, fell from R. 0.75 per litre to R. 0.25 and frequently less. Power alcohol is now being produced by the same distillery and is already commencing to be employed on a certain scale as a substitute for petrol in motor lorries.

Oil Crops.—A considerable impetus has been given to the cultivation of oil crops principally pistache, by the opening of a new Oil Mill by the Innova Refinery Company which has installed an oil extraction and refinery plant of modern type and has entered into contracts with a number of estates for the cultivation of areas under Pistache and the purchase of the crop. As a result there has been a marked increase in the area under cultivation of this crop which grows well on most lands of Mauritius and is well suited to cultivation as a rotation crop with cane and even in the interlines of young virgin canes. If the enterprise prospers as it deserves an important step will have been taken towards the firm establishment of the cultivation of this staple.

The Fruit Canning and Preserving.—During the year at the instance of the Minor Industries Development Committee in Plaines Wilhems a series of commercial experiments were carried by the Honourable J. M. Brodie O.B.E. on the commercial manufacture of guava jelly, the produce being shipped in England for experiment sale. The results achieved were so far satisfactory as to warrant further continuation of these efforts. During the same period attention commenced to be turned to the possibility of producing pine apples for preserving and export. It was formerly held that the Mauritius pine was too small in size and indifferent in flavour to offer much attraction in this direction but it soon became evident that this was merely due to the indifferent manner in which the plant was cultivated locally. As a result of the increased attention given to this question a marked improvement took place during the year in the types of pine coming on the local market. Simultaneously a group of gentlemen locally began the investigation of the possibility of starting a small syndicate for the cultivation of pines and other fruits and for the manufacture of preserved pine apples, jams and jellies. By the end of the year matters had advanced sufficiently far

to enable discussions to take place between the Department of Agriculture and the Gentlemen interested with a view to ascertaining what steps could be taken towards assisting developments and it has been provisionally decided to endeavour to arrange for the despatch to South Africa of an officer of the Department with a view to investigating on the spot the possibilities contained in this line of development. If further investigations bear out the ideas at present held there appears to be every prospect of steps being taken towards the establishment of an additional industry in the Colony.

Vanilla.—No actual progress is recorded in relation to the production of vanilla. At the same time there appears to be scope for appreciable developments. To my own mind it seems highly probable that the existing severe legislative restrictions on the cultivation of the crop are merely having the effect of strangling the industry.

Coffee.—Small areas of coffee are cultivated in the Colony entirely for local consumption. The higher lands are well suited to the crop and provided resistant varieties are grown the plant can be successfully cultivated. Some interest in this question is now being shown and 2,200 plants of coffee have been distributed by the Agricultural Department during the year. There is no very obvious reason why in due course a not unimportant industry might not develop.

Tea.—No progress can be reported in this industry. The competition of foreign teas, especially Ceylon's, renders the development of the local industry problematical, in the view of the high cost of production which local teas probably attain.

Coconuts.—No particular interest was manifested in this crop during the year. All the coprah exported from Mauritius is the produce of the Oil Islands (Dependencies of Mauritius) which turn out 8 to 9 hundred tons yearly on the average.

Food Crops.—A certain amount of interest continued to be maintained during the year on the production of food crops. In 1925 maize was grown on about 2,600 acres and manioc on 3,500 acres approximately. Vegetable gardens occupied about 3,500 acres. Little change occurred under the two first heads in 1926 but vegetable gardens continued to increase and the production of vegetables in the Colony during the past year has been one of the largest on record. It may be noted that the cultivation of Teneriffe onions is gaining in popularity to some extent.

Live Stock.—Importation of cattle from Madagascar in 1926 numbered 5,555 heads of a total value of Rs. 375,207.

A perceptible recrudescence of interest in the local cattle breeding industry was manifested during the year, while attention continues to be paid to small stock. The Mauritius Stock Breeders Association contemplate the introduction into Mauritius of the Angora goat from South Africa, and it is also intended to introduce the Charolais breed of cattle.

The Government Dairy at Curepipe continued to work satisfactorily, and several enquiries have been received from persons desiring to make similar installations.

The Stock Farm of the Department of Agriculture was maintained. The new breeds of cattle introduced through the agency of this institution have now had a perceptible effect on the local breeding industry, as was very clearly shown in the excellent series of exhibits of cross breed animals which were shown at the Agricultural Exhibition in October.

Proposals for further assisting the local breeding industry were considered during the year by the Stock Breeders Association and the Board of Agriculture, one of these proposals comprising the establishment of a central fund for assisting local breeders. In addition the question was considered of the improvement of the control at present existing in relation to the slaughter of cows and heifers of the milch breed under the age of five years as provided by Ordinance No. 1 of 1918 and regulations made thereunder, which in spite of vigilance are apparently being evaded to a considerable extent. The general question of the milk supply of the Colony was considered at a special meeting of the Societe des Chimistes held during the year and a committee appointed to report further on the question.

Animal Diseases.—The campaign against surra was maintained on the lines previously established; the number of animals examined and the number of cases detected in each of the past four years is shown below:

Year		Number of animals examined		No of infected animals detected		Percentage of infected animals on total examined
1923	...	5,968	...	150	...	2.5%
1924	...	5,959	...	37	...	0.5%
1925	...	7,330	...	59	...	0.8%
1926	...	7,506	...	44	...	0.6%

In 1924 out of 37 animals 6 were equines, in 1925 out of 59 infected animals 13 were equines and in 1926 out of 44 infected 4 were equines. In accordance with the regulations all cases of surra on equines were destroyed on detection.

The results of the campaign have on the whole been regularly successful, the local epidemics which were of frequent occurrence previously have now entirely disappeared and the disease no longer constitutes a serious annual source of loss.

No outbreaks of Piroplasmosis were recorded during the year. Attention became focussed on the prevalence of bovine tuberculosis during the year. The disease is still widespread in breeding herds, although owing to the conditions under which cow keeping is practised, it is only present to a very minor degree in milch cattle. It however proves a serious impediment to the utilisation of local animals for slaughtering and for working purposes. In this connection plans were put forward for a systematic campaign for the eradication of the disease which will it is hoped be successfully inaugurated during 1927.

The Government Veterinary Surgeon paid a visit of inspection to Reunion and Madagascar in April and May in connection with the prevalence of swine plague and anthrax in these two places, with a view to safeguarding against the introduction of these diseases to Mauritius. As a result it was found necessary to prohibit the introduction of pigs from Reunion. The Government Veterinary Surgeon also proceeded to Rodrigues in October with a view to investigate an obscure malady of goats with high case mortality in that dependency. Subsequently the importation of goats from Rodrigues was as a temporary measure prohibited.

The various animal quarantine requirements were strictly enforced during the year, as a result of this measure taken, Mauritius has now been free from any instance of introduction of animal disease during the past five years, while general health conditions in relation to stock with the possible exception of tuberculosis on breeding herds, are on the whole more favourable now than at any time during the past 24 years.

AGRICULTURAL EDUCATION

The Mauritius Agricultural College continued its operations during the year, which are reviewed in a separate report. The value of this institution as a training ground for future employes in the agricultural industries of the Colony is indubitable, and it is certain that in due course the effect thereof will make itself felt in an increasing degree. On the majority of estates at the present time are to be found chemists and factory employes who are either past pupils of the College or its forerunner the School of Agriculture or who have passed the examinations prescribed for the registration of Agricultural Chemists.

Examination for the registration of Agricultural Chemists were held in July and in Sugar Technology for the certificate of the City and Guilds of London Institute in May.

In so far as elementary agricultural education is concerned, by direction of the Governor the whole system was discussed at length between the Director of Agriculture and the Superintendent of Schools during the year, and as a result a scheme was put forward for the inauguration of a Farm School, the extension of the apprentice system, the extension and further systematisation of school garden work and provision for regular training in nature study of pupils at the Teachers' Training School. These proposals have since been submitted to the Secretary of State.

In so far as the instruction of the small planters is concerned, proposals were approved during the year for the appointment of three additional agricultural instructors to be recruited from graduates of the College of Agriculture.

CO-OPERATIVE CREDIT SOCIETIES

There is little progress to note in relation to the co-operative credit movement which is reviewed in a separate report.

AGRICULTURAL SHOWS

An Agricultural and Industrial Exhibition on a considerable scale was organised and held at Line Barracks, Port Louis, on October 1st, 2nd and 3rd. It was the first of the large exhibitions which under the approved Show policy it is proposed to hold at intervals in alternation with smaller shows in the districts. Provision was made in the Prize List for all classes of produce and all forms of industrial activities in the Colony, a special commercial section enabled a large number of mercantile firms to mount special displays, while exhibits were also displayed by a number of Government Departments. The Show which was fully reported in a special illustrated number of the *Revue Agricole* proved a great success, and has had valuable results both in increasing interest in various forms of agricultural production, in disseminating information and stimulating trade, and is admitted to have been by far the best ever held in the Colony. The Show was opened by His Honour Sir Allan Grannun C.M.G., Officer Administering the Government, and was attended by upwards of 20,000 people.

RODRIGUES

There is no particular event of importance to record in relation to this dependency. The work of the Experiment Station is reviewed in a separate section.

PART II.

WORK OF THE DEPARTMENT OF AGRICULTURE DURING THE YEAR 1926.

Staff Changes.

Dr. H. A. Tempany returned from leave of absence in England on January 20th.

Mr. D. d'Emmerez de Charmoy, Assistant Director, proceeded to Réunion on two months leave of absence in March.

Mr. E. F. S. Shepherd B.S.A., Botanist and Mycologist, acted as Assistant Director and Mr. W. H. Edwards D.I.C. as Entomologist, Mr. A. Moutia as Lecturer in Entomology.

Mr. L. Baissac resumed his duties as Sugar Technologist in July.

Mr. F. E. Lionnet Ec. Vet. was absent from the Colony on special mission to Réunion and Madagascar in April and May, during his absence Mr. R. Bradshaw officiated as Government Veterinary Surgeon.

Mr. R. Laval, Assistant Chemist, died in November and Mr. R. Lincoln B.A. Cantab. was appointed to succeed him.

Mr. E. F. S. Shepherd B.S.A., Government Botanist, proceeded to England on 10 months leave of absence in December. Mr. W. H. Edwards D.I.C. was appointed to act as Government Botanist and Messrs. A. Moutia and J. Vinson respectively as Lecturer in Zoology and Entomology and Assistant in the Entomological Division.

Mr. W. Bourdet relinquished his appointment of Assistant Inspector Co-operative Credit Societies in October and resumed duty as acting Fifth Class Clerk.

Mr. J. V. Ramlowat was appointed to act as Assistant Inspector Co-operative Credit Societies in June.

The operations of the various divisions are reported in the following pages.

ENTOMOLOGICAL DIVISION

The Entomologist reports as follows :—

During the absence on leave of the Entomologist, Mr. W. H. Edwards, Lecturer in Entomology in the Agricultural College, acted during two months as Entomologist.

Campaign against Phytalus Smithi.—As in previous years, the results for the 1924–25 campaign have been summarised in a special report printed and distributed amongst those concerned.

By the end of the year the presence of the pest was detected at three different localities viz : Sebastopol, Phœnix, including Highlands Estate, Trianon Estate and Phœnix Village, and Montagne Longue including Industrie Estate and Valleton Estate.

At Sebastopol it was ascertained that the pest had spread over a superficies of about one thousand acres, from Sebastopol village to Etoile camp on one side and from Sebastopol old mill to Mountain Jacquot on the other side. The infection was noticed to be very severe at the vicinity of the Railway Station on a superficies of about 50 acres. Immediate measures were adopted with the results that within two months about 4 millions beetles were destroyed.

At Phœnix, the main centre of infection is situated on that portion of land on the right hand side of the branch road leading to the Vacoa Military Camp.

At Highlands and all over the village the infection is of a very light character, so that there is ground to believe that the pest will be kept under strict control at this new centre.

The discovery of the pest at Sébastopol and Phœnix coupled with the extension of the Moka district infection has necessitated the appointment of a resident Officer at Sébastopol and the appointment of a Travelling Officer for the Flacq-Moka-Plaines Wilhems districts, whose duties assist in the general supervision of the whole campaign of destruction in those three districts.

At Industrie and Valleton, the infection is neither intense nor widespread and may have originated from Pamplémousses through extensive traffic between these two localities.

At Joli Bois and Pamplémousses although the number of insects destroyed is practically the same as in previous years the position is satisfactory as a wide area has been cleared of the pest and except at a few spots the spread of the insect is kept under control.

Experiments on the control of insect pests.—Again in 1925 experiments were conducted at Pamplémousses and Joli Bois for the control of *Phytalus* grubs with Calcium Cyanide and Paradichlor and Petrol, the results have so far proved of no practical value.

Lachnosterna grubs.—An outbreak of this insect (*Rhizotrogus pallens*) was observed at Bassin Estate by the end of December and another one at Ebene Estate on Béga lands. The collection of the beetles at night proved successful for the control of this indigenous grub pest.

The following is a list of insect pests which have been noticed affecting, more or less seriously, various crops.

On Tobacco.—*Spodoptera mauritia*—*Chloridea obsoleta*—*Prodenia litura*.

On Onion.—Thrips.

Sweet potato.—*Elachista* sp :

Artichoke.—*Porbe Bjerkandrella*.

Sugar cane.—*Leucania unipuncta*.

Various plants.—*Acredium* sp.
Solenopsis geminata.

Tiphia Parallela.—This wasp was again liberated in fair number at Beau Bois and Circonstance with a view to controlling the *Phytalus* pest. Up to now there is no evidence that it has established itself and fresh attempts will be made early in 1927 under the direct supervision of this division.

A good deal of time was spent in issuing verbal and written advices in connection with the control of harmful insects. Visits were paid by officers of this division and spraying carried out by them on several occasions. About eight sprayers were out during the year on loan to growers for the treatment of their crops. Insecticides such as Paris Green and Arsenate of lead which are not readily obtainable on the local market were supplied free to small planters.

Two outbreaks of locusts were observed at Trianon and Côte d'Or and adequately dealt with. Several outbreaks of the chicken flu occurred during the year in various localities. The treatment prescribed proved effective in every case.

Investigations on Animal Parasitology and on the Diseases which affect farmyard animals.—As in previous years this division has conducted special researches in connection with diseases affecting small farmyard animals.

About 75 post mortem examinations were made for the public with a view to ascertaining the causes of the mortality which occurred in each case and which proved to be as follows:—

Fowls.—White diarrhea of chickens was ascertained to be due in most cases to Coccidiosis infection and in a lower degree to bacterial infection.

In a few cases the following Protozoa were suspected to be the cause of the ailment, viz :—
Lamblya, *Blastocystes* and *Amœba*.

Pernicious Anaemia.—About 5 cases were recorded of this rather rare disease which was noticed for the first time in the Island. The fungus which invades all the internal organs of the diseased birds was identified as belonging to one of the numerous parasitic species of *Aspergillus*.

Septicemia.—Besides fowl cholera which has again prevailed sporadically this last summer, many cases of this type of disease were recorded ; the mortality could not be ascribed to any specific organism.

Worm infection.—Mortality from worm infection was specially noticed on 4 to 6 week old chickens and was found to be occasioned chiefly by the stomach spiraptera.—*Dispharagus nasutus* and *Tœnia* sp.

Typhoid of Birds (Typhose).—A series of post mortem examinations of chickens suffering from a light attack of chicken pox made at the end of the year would to prove that these birds died from fowl typhoid. Although the clinical symptoms of the disease, together with the post mortem lesions and the nature of the micro-organism detected lead to this conclusion, a further study of the biochemical reactions of the bacterium is essential before a definite statement can be made. Heavy losses due to this disease have again in 1925 been sustained by various small breeders.

Ducks-Neuritis.—This disease which affects as a rule ducklings was in 1925 responsible for the mortality of a large number of adult birds. No specific organism could be detected in the cases observed.

Enteritis.—Newly hatched ducklings were noticed to have died from acute enteritis occasioned by a protozoa of the Ciliate group of the genus *Urenoma*. This protozoa has been observed so far in one case only on human being (case of dysentery).

Rabbits.—About 10 cases of Paraplegia (paralysis of the hind limbs) which ended by the death of the animals were observed. This disease which does not seem to have ever been described was noticed for the first time in 1925 and seems to have a tendency to spread.

Septicemia.—Spontaneous septicemia occurred at the poultry run and within a few days wiped out the whole rabbitry. Numerous cases of ear-mange were observed in different localities.

A great number of slides (faeces and blood smears) were submitted for examination by the Veterinary Division for detection of parasites.

Lamblyasis, and Coccidiosis were detected on cattle ; Blastocystosis and Ankylostomiasis on dogs.

Examinations of Plants and Fruits.—109 inspections were made in connection with the importation of fruits, plants, cuttings, tubers, consisting of 263 cases of fruits and 142 parcels of tubers, cuttings and lime plants.

Contribution to the Revue Agricole.—The officers in this Division contributed various articles dealing with insect pest and farmyard animals.

Education.—The Entomologist delivered a series of lectures at the College of Agriculture in Animal Husbandry (Section Breeding of Farmyard Animals).

CHEMICAL DIVISION

The Chemist reports as follows:—

I. Staff.—The provisional appointments of Mr. R. Laval and of Mr. F. Berchon as Assistant Chemist and as Scientific Assistant respectively were made permanent in February.

I must regret having to record the death of Mr. R. Laval, who died after a short illness on November 20th. I wish to place on record my appreciation of the willing and able manner in which he performed his duties.

Mr. R. Lincoln B.A., who lately graduated at Cambridge University, has been appointed to the post of Assistant Chemist.

II. Laboratory Accommodation.—An old lean-to shed which was formerly used as a fume cupboard and distillation shed has been removed in order that a window could be made in the wall of the main laboratory. A new shed for the preparation of distilled water has been built, and a fume cupboard has been constructed in the laboratory.

Plans have been prepared for the installation of gas in the various laboratories of the Department. The materials necessary for this installation have been received, but have not yet been installed. It is expected that the work will be started in the near future.

III. Investigational Work

(a) *LOSSES OF NITROGEN DURING THE STORAGE OF FARMYARD MANURE.*—This investigation was carried on from the previous year. In this series of experiments all the tanks were covered, but as before, the manure in two was compressed, and in the other two it was not. To one of each pair, molasses was added to find its influence on the rate of fermentation, and its influence on the losses of nitrogen in the manure. As a result of these investigations, it has been shown that increased losses occur when molasses is applied to the manure heap, but that at the same time the rate of decomposition of the straw is greatly increased. The results of this work have been prepared as a bulletin, which will shortly be sent to the press.

(b) *AVAILABILITY OF PHOSPHATES IN SLIGHTLY ACID SOILS.*—A considerable number of samples of soil taken from various parts of the Colony have shown a slightly acid reaction, and it would seem that in general the soils have a pH. value between 5.0 and 6.3.

The availability of phosphates, in the form of phosphatic guano and of superphosphate, in a soil of this description was tested, both with and without the application of lime. The results of this set of experiments seem to indicate that both forms of phosphatic manure are equally available, and that the application of small dressings of lime does not increase the availability. In all the experiments only about 7% of the phosphorus applied in the fertiliser was available at the end of a period of two months. Both the phosphatic guano and the superphosphate of lime brought about a reduction in the hydrogen ion concentration of the soil.

The results of this investigation were published in the *Revue Agricole*. Further investigation into the availability of phosphates is under consideration.

(c) *FUEL VALUES OF DIFFERENT WOODS.*—An investigation into the fuel properties of fourteen samples of wood was carried out, those with the highest calorific values being: *Eucalyptus tereticornis*, *Acacia manille*, *Casuarina equisetifolia* (Filao), *Aphloia theiformis* (Fandamane), and *Tetranthera monopetala* (Yatis). Those with the lowest values were:—*Tetranthera laurifolia* (Bois d'oiseau) and *Eugenia jambolona* (Jamblon).

A full report of the fuel properties has been prepared for the *Revue Agricole*.

(d) *CALORIFIC VALUES OF BAGASSE.*—Samples of bagasse were taken from mills in different parts of the Colony, and on each sample the following estimations were performed:—moisture, sucrose and calorific value.

In addition to these, samples of bagasse were taken from canes, crushed in the Experimental Mill at the Central Experiment Station, in connection with the cane variety experiments conducted by the Agricultural Division. The main object of this investigation is to find out what variations occur in the calorific value of the fibre content of the different varieties of canes. Consequently the bagasse was well washed to get rid of all the sugar and then dried. The estimation of the calorific values is at present in hand.

(e) ANALYSIS OF MILK FROM THE GOVERNMENT DAIRY, CUREPIPE.—The periodical analysis of milk from this dairy was carried out during the whole year, and in all 176 samples were analysed. As in the previous year, the samples were tested for:—(a) Butter fat, (b) Solids not fat, (c) Lactose. The monthly averages for both morning and evening milk are given in the following tables.

Morning Milk

Month No. of samples	January 6	February 8	March 9	April 7	May 9	June 8	July 9	August 9	Sept. 7	Oct. 5	Nov. 6	Dec. 7
Fat ...	3.0%	3.05%	3.05%	2.95%	3.1%	3.2%	2.08%	2.65%	2.8%	2.8%	2.95%	3.6%
Solids not fat	8.03	8.55	8.55	8.5	8.5	8.4	8.4	8.3	8.4	8.5	8.5	8.4
Lactose ...	4.45	4.40	4.3	4.4	4.4	4.4	4.55	4.4	4.3	4.3	4.3	4.3

Evening Milk

No. of samples	6	8	7	7	9	7	8	9	6	5	7	7
Fat ...	3.55%	3.95%	4.1%	4.0%	4.05%	3.9%	4.0%	3.75%	3.8%	3.5%	3.5%	4.1%
Solids not fat	8.45	8.65	8.55	8.5	8.06	8.6	8.55	8.05	8.5	8.5	8.6	8.6
Lactose ...	4.5	4.3	4.01	4.3	4.03	4.4	4.55	4.4	4.3	4.3	4.3	4.1

From these figures it would seem that the variation which occurs in the morning milk is that there is a falling off in the quality of the milk, both as regards butter fat and solids not fat from June to August and September, when the quality is the poorest. The lactose content of the milk is fairly constant, the limits for the monthly averages being 4.55% to 4.3%. During the whole period under review the butter fat content is well above the legal limit, whereas the solids not fat vary from slightly over the limit to slightly under.

As is to be expected the evening milk is much richer than the morning milk, both in butter fat and in solids not fat, the former varying from 3.5% to 4.1% and the latter from 8.45% to 8.65%. In this case the richest milk was obtained about March, after which a gradual fall in quality occurred until October and November, a sharp recovery taking place during December. The lactose content however was lowest in March and greatest in July. As all the evening samples were preserved with Formaldehyde, it seems probable that the lactose content would not be changed very much by bacterial action during the interval which elapsed between the time of milking and when the sample was analysed.

The variations shown by individual samples are much much greater than those shown in the monthly averages; the variations are given below:

Morning Milk

Butter Fat	...	...	...	...	2.4% — 5.2%
Solids not Fat	...	...	...	...	8.0% — 8.7%

Evening Milk

Butter Fat	...	...	...	...	3.0% — 5.1%
Solids not Fat	...	...	...	...	8.1% — 8.9%

(f) EXPERIMENTS WITH DENATURANTS FOR POWER ALCOHOL.—Samples of alcohol and of various denaturants were received from the Honourable Receiver General, and experiments have been made with the object of preparing denatured alcohol, free from colouring matter, for use in internal combustion engines. These experiments are still in hand.

(g) SOIL SURVEY.—Further samples of soils have been taken in the Moka District, but due to the pressure of work in other directions, the analysis of these samples has not yet been completed. As soon as they are completed, the results will be published, and samples will be taken from the district of Flacq.

(h) TOBACCO EXPERIMENTS.—Eight samples of tobacco were analysed in connection with a manurial experiment carried out by the Tobacco Officer of the Department.

In general it may be taken that the albuminoids are rather high, but that the nicotine is not correspondingly high, the former ranging from 20% to 24.9%, and the nicotine from 2.76% to 4.05%, all results being calculated on dry matter in the leaf.

The ash, including sand and carbon dioxide, amounted to between 19% and 23.9%, so that these samples were rich in ash. Compared with published analyses, the ash was poor in Calcium Oxide, but rich in Magnesium Oxide, the two being equal to between 34% and 40% of the total ash. The ash also contained less Potassium Oxide and more Chlorine than shown in published figures. These results are quite in keeping with those of the previous year.

IV.—Routine Analyses

The routine work of the Chemical Division was much less during the year under review than in the preceding year, due to the smaller number of samples received for analysis.

The analyses performed for the public are as follows :—

	<i>Samples received</i>	<i>Estimations</i>
Guano melange ...	13	62
Lime ...	32	35
Dipping Solution ...	68	68
Saltpetre ...	8	18
Sulphate of Ammonia ...	9	9
Phosphatic Manures ...	8	10
Fumier ...	14	35
Miscellaneous ...	14	69
Total ...	166	306

In addition to the above and also in addition to the very large number of analyses performed in connection with the investigational work above mentioned, the following routine work was done in connection with the work of the Department.

	<i>Number of Samples</i>	<i>Estimations</i>
Cane Juices ...	877	1,754
Feeding Stuffs ...	16	...
Essential Oils... ..	13	...
Miscellaneous ...	6	...
Total ...	912	...

V.—The Mauritius Agricultural and Industrial Exhibition

A considerable amount of work was done in connection with this Exhibition, mainly in regard to the preparation and the staging of exhibits. All officers of the division took part in various capacities, assisting either as clerks or as receiving officers for exhibits in the various sections. The Chemist was appointed one of the Judges in the Dairy section.

The Chemist and Assistant Chemist also performed the chief part of the work in connection with the Clean Milk Competition, which was organised as part of the Exhibition.

VI.—Publications

(a) A short report on "The availability of Phosphates in slightly acid soils" was published in the *Revue Agricole*.

(b) The results of the experiments conducted during the years 1924 and 1925 in relation to the Nitrogen Cycle have been written up in the form of a bulletin entitled "Reversion of Nitrates in Mauritius soils under Cultural Conditions." This bulletin is at present in the press.

(c) A further bulletin of the General Series has been prepared, under the title of "The Preparation and Storage of Farmyard Manure under Mauritius Conditions." This bulletin will shortly be sent to the press.

VII.—Education

The usual duties in relation to teaching at the Mauritius Agricultural College were performed by the Lecturer in Agricultural Chemistry and the Assistant Chemist. These duties consist of the delivering of two lectures weekly to each class, and of the supervision of two laboratory periods weekly with each class.

VIII.—Examinations

The Lecturer in Agricultural Chemistry was appointed Sub-Examiner for the following University of London examinations :—

(a) Matriculation Examination, January 1926.

(b) Matriculation Examination, June 1926.

(c) Intermediate Arts and Science Examinations, July 1926.

In addition to these the above officer was appointed one of the four examiners for the examination for the Registration of Agricultural Chemists.

BOTANICAL DIVISION

The Botanist reports as follows :—

The work during the year 1926 comprised investigations on the physiology of the sugar cane, sugar cane selection work, investigations on sugar cane and other plant diseases, miscellaneous work and lecturing and supervision of laboratory work in the College of Agriculture.

Investigations on the physiology of the sugar cane

The observations in connection with the rate of growth of the sugar cane and the effects of environment at Reduit, Pamplémousses and Medine were concluded and the results for Medine published in the Report on the Irrigation Experiment Station, Medine. The results for the two other stations are in the process of completion and will be published in due course.

As a result of these observations it has been found possible to calculate the percentage of the total crop formed during each month of growth, and the effect on this of climatic conditions.

The results of the investigation on the transpiration ratio of the sugar cane were also published in the report on the Irrigation Experiment Station, Medine.

Investigations on Plant Diseases

Plant Inspection Service.—This service has been continued mainly along the lines upon which it was launched and continued during 1925. During the year under review there have been 108 inspections of plantations conducted by the Plant Inspector. After each inspection, this officer submits a report and when necessary, the estate on which the Plant Inspector has reported some feature of special importance, has been visited by the Botanist and Mycologist and advice given to the planter concerned as to the means of control of the existing disease. In any case, whenever it has been deemed necessary, letters of advice have been issued to planters on the means of control against diseases of sugar cane or other crops reported by the Plant Inspector.

During 1926 there has been discovered only one previously unrecorded disease or abnormal condition of the sugar cane, to which the name "bunch top" has been applied. This abnormal condition has been discovered on five estates of the Island on the White and Striped Tannas only but not on a scale to cause any appreciable loss. It is not regarded as being occasioned by the attacks of a parasite and is therefore apparently not infectious.

The Plant Inspector has been rendering useful service also in spending one day a week re-arranging the specimens in the Herbarium at Pamplémousses, which is in a serious need of attention.

The remainder of the time of this officer has been spent, as reported last year, in assistance in the Laboratory and field investigations of the Botanical Division.

Sugar Cane Diseases

Streak.—This disease was found on eight different estates during 1926, but the percentage of infection wherever found is still very low, not exceeding 1%. The aerial transmission of the disease from infected to healthy sugar cane is apparently still not readily effected in Mauritius. No variety other than the R.P. 8 has yet been found affected, and even on this variety the vegetative activity of diseased canes is not usually seriously affected.

It was reported last year that a similar disease had been discovered on maize, *Coix edulis* and eight species of wild grasses. During 1926, the disease was found on *Cenchrus echinatus* and two undetermined species of wild grasses in addition to those mentioned above.

Whenever practicable diseased stools of cane have been uprooted and destroyed almost immediately after their discovery, but in some fields in which the canes were very tall and in which lodging had taken place due to the cyclone in April the eradication of the streaked stools has been postponed until after the crop has been harvested.

Gumming Disease.—Caused by *Bacterium vascularum* was again found widespread over the Island. In some fields of the varieties M. 131, M. 55, M. 87, Port Mackay, especially the last two, the disease sometimes spread to a serious extent, but due to the fact that the sugar cane fields of the Island are for the most part planted in White Tanna and other varieties highly resistant to gumming, the disease does not assume an epiphytotic form over the Island as a whole. Careful selection of planting material and avoiding the cultivation of susceptible varieties would reduce the amount of this disease in the Island to a negligible quantity.

Smut.—Caused by *Ustilago sacchari* was observed on thirteen estates, only four of which were in districts other than Black River and Rivière du Rempart, the driest parts of the Island, and one of the four was almost on the Black River border of Plaines Wilhems. The varieties affected were M. 131, M. 55, D.K. 74, R.P. 8 and White and Striped Tanna.

Pineapple Disease.—Caused by *Thielaviopsis paradoxa* again was the frequent cause of the partial or complete destruction of cuttings. An experiment was laid out at the Central Experiment Station, Réduit, to determine the effect of immersing the cuttings in 4:5:40 Burgundy mixture before planting in the control of pineapple disease. 200 cuttings were thus treated and planted and 200 planted without treatment. At the time of writing—about six weeks after planting—57 cuttings have produced sprouts appearing above the ground in the treated plot and 26 in the untreated plot. Six or seven cuttings which had failed to sprout were uprooted in each plot. In the untreated plot all were decaying and all except one showing typical symptoms of pineapple disease, while in the treated plot all of the uprooted cuttings had commenced to sprout.

Red Rot.—Caused by *Colletotrichum falcatum*, was observed on nine estates on the varieties White Tanna, D.K. 74, M. 131, M. 33, M. 87, R.P. 6 and M. 55. On two estates the disease was found to be the cause of the failure of the sprouting of planted cuttings.

Attacks of *Colletotrichum falcatum* and *Thielaviopsis paradoxa* on the basal parts of sugar cane stems were suspected as being amongst the causes of a top rot which occurred on two estates.

Root Disease.—Was reported on five estates. The exact cause of this type of disease still remains obscure, but, as reported in former years, most cases seem to be brought about or aggravated by unfavourable conditions for growth, such as, drought, lack of drainage, cultivation and fertilizers.

An infection of an unknown variety of cane on one estate in the Black River was strongly suggestive of an attack of collar rot, caused by *Hendersonina sacchari*. The spores of the fungus in association with the diseased tissues were very similar to if not identical with those of *Hendersonina sacchari*.

Diseases on plants other than Sugar Cane.

Coconuts.—During 1926 three new areas of coconuts at Pointe aux Sables showed symptoms of the disease reported last year. These new areas were, however, separated by blocks of healthy tress. After a study of environmental conditions it is now considered that the unhealthy appearance of the coconut trees at Pointe aux Sables is due more to the configuration of the land,—resulting in a water logged condition of the soil in some areas and to lack of water in others—than to the presence of any specific parasite in the soil. The drainage of water-logged areas would involve too great an expenditure of money to make the attempt worth while. The inoculation experiments with fungi from diseased coconut roots reported last year have up to the present yielded negative results.

A portion of a coconut plantation at Albion Estate developed symptoms similar to those at Pointe aux sables, but it was considered that the unhealthy conditions of the trees there was brought about by the flooding of the land with water flowing from an aloe fibre factory.

Filao.—The plots at Les Bouchons laid out, to test whether or not the so-called "Smut" disease of the filao (*casuarina equisetifolia*) was carried over in the soil from one plantation to the next were inspected in November. In the plot planted in 1920 and containing the oldest trees, there was a small area in which a number of trees were succumbing or had succumbed to a disease. One tree only was showing signs of "Smut" (*Trichosporium versiculosum*) in the bark. The fact that all the dead and drying trees were together in the same area pointed to the conclusion that they were being killed by the attacks of a soil parasite. Whether or not it is a reappearance of the same disease which wiped out the previous plantation still remains to be proved. The causal organism of the disease has not yet been discovered. The effect of entrenching the diseased area in checking the spread of the disease is to be tried.

A disease with identical symptoms has been discovered involving two distinct area in the vicinity of Pointe d'Esny. In one of these areas *one* tree is showing the presence of the "Smut" (spores of *Trichosporium versiculosum*) in the bark.

Tobacco.—Mosaic disease was reported from and observed on several plantations. The ratoons are chiefly affected, but at the Morne and at Terre Rouge there were respectively heavy percentage of infection on virgins. The possibility of the transmission of the disease or otherwise in the seed is being tested.

There were also several outbreaks of Granville wilt caused by *Bacillus solanacearum*, and leaf spots of various types. One is undoubtedly that caused by *Cercospora personata*, another type apparently of bacterial origin though further experimental work is needed to prove this point, and the third—a white speck—apparently of non parasitic type. This white specking was observed particularly wide-spread on a tobacco plantation in the Rivière du Rempart District, chiefly on the ratoon shoots. An experiment is being conducted to test its transmissibility or otherwise in the seed. No organism could be found associated constantly enough with this spot to warrant suspecting it as the cause of the trouble.

Potato (Solanum tuberosum).—The blight, caused by *Phytophthora infestans*, was of frequent occurrence and occasioned heavy losses. Experiments conducted at the Central Experiment Station, Reduit, and on a plot at Bambous proved that the regular applications of a spray of Burgundy mixture to potato plots during weather favourable to the spread of the blight is an economical means of checking the ravages of the disease.

A "collar rot" of potatoes, marked above ground by a shortening of the internodes of the stem, a rolling inwards of the leaves and the formation of aerial tubers was observed at Reduit and Bambous. A *Rhizoctonia*—thought to be *R. solani*—was found in association with *freshly* diseased tissue.

Pistache (Arachis hypogea).—A heavy infestation of leaf spot caused by *Cercospora personata* was observed on the experimental plots at Reduit, chiefly on the varieties Virginie and Gambia.

On Peas (*Pisum sativum*) a collar rot was observed in a garden in Rose Hill. A *Fusarium* was found in association with diseased tissues.

Control measures recommended included removal and destruction of diseased plants, stirring of soil, liming of the bed and burning the top layers of the soil after the harvesting of the peas.

Letchi (*Nephelium litchi*).—The trees reported last year as being infested with an alga, believed to be *Cephaleuros mycoidea*, were inspected again during the year under review. Both trees were still bearing a growth of the alga, but on one which had been manured there was a much higher algal growth than that on the other tree.

Grasses.—The sphacelial stage of an ergot was found on both *Paspalum dilatatum* and *Panicum maximum*.

Manioc (*Manihot utilissima*).—A “die-back” of the twigs, believed to be caused by the fungus *Gloeosporium manihoti*, has been frequently observed. From observations made the varieties Beureum, Bitter and Negrita II seem to be more resistant than the other varieties both at Reduit and at Pamplémousses Experiment Stations.

Banana.—A few cases of wilting plants were sent to the laboratory from Grand Port showing symptoms strongly suggestive of the Moko disease caused by *Bacillus musae*.

During October the Botanist and Mycologist was despatched to Rodrigues to report on the working of the Experiment Station there and to investigate a disease of manioc. This mission formed the subject of a special report. The disease of manioc was found to be a “die-back” of the twigs, with which was found associated a *Gloeosporium* believed to be *Gloeosporium manihoti*. In some parts of the Island the disease existed in an acute form.

Streak disease was observed on maize and on a species *Coix* in Rodrigues.

Miscellaneous Work included :

(a) Supervision of London University Examinations.

(b) Inspection of School Gardens with the Chief Agricultural Officer.

A bulletin on Diseases of Sugar cane in Mauritius was published during the year under review.

The Botanist and Mycologist delivered three lectures and supervised two laboratory periods per week in Botany and Mycology at the College of Agriculture.

VETERINARY DIVISION

The Government Veterinary Surgeon reports as follows :—

Importation of Animals.—During the year the following animals were imported into the Colony.

Foreign Countries			Dependencies		
Horses	...	45	Donkeys	...	4
Mule	...	1	Dogs	...	4
Cats	...	2	Pigs	...	1,669
Dogs	...	6	Goats	...	1,823
Madagascar Bullocks	...	5,555	Sheep	...	756
Pure bred bull	...	1	Bullocks	...	613

Quarantine Station.—One Friesland bull imported from South Africa for stud purposes was placed under observation for 6 weeks previous to its liberation. 6 dogs and 2 kittens imported during the year have undergone 6 months quarantine, 1 dog died of pneumonia during the segregation.

Government Animals.—Animals of the following Department were treated.

Police Department.—Two horses treated and cured for lameness, one horse for wounds through accident, and on three occasions antitetanic serum were injected to horses wounded by nails in their hoofs with success.

Medical and Health Department.—Bullocks of Curepipe Sanitation were attended for Colics, Keratitis, Lameness and Bruising. One bullock died at Mahebourg of chronic Meteorisation. A donkey and two mules at Port Louis were treated for lameness.

Stock Farm.—One Hissar bull was treated for enteritis and recovered. A second one died of ulcerative gastro enteritis. One Ongole cow died of peritonitis through calving. A Friesland calf recovered from keratitis, one heifer and two bull calves died of wire worm infection, and the imported Friesland bull “Elsenburg” died of old age.

Government Dairy.—Cows of the Dairy were treated for pneumonia, lameness, bruising and foot rot. One cow died of rupture of the spleen through a fall. Three cows died of internal hemorrhage with lesions of splenomegalia of an obscure character ; specimens of all organs and blood have been microscopically examined without specific determination. Two cows died of septicemia owing to prolapsus utera, two others died of pneumonia, one of arsenic poisoning, and another one through dystocia.

Woods and Forests Department.—One bullock was operated for an abscess and recovered.

Cases of Cruelty.—Fifteen horses, mules, bullocks and donkeys were examined at the request of the Police Department for cruelty on animals.

Contagious Diseases.—One case of epizootic lymphangitis was recorded on a horse, the animal which was placed under one month quarantine was subsequently destroyed being incurable.

Surra.—The number of smears taken and examined during 1926 was of 7,506. 44 positive reactions were recorded amongst which 4 equines (2 mules and 2 horses) which were destroyed.

Tuberculosis.—12 milch cows were tested with tuberculin with negative results, and the B.C.G. vaccine injections were started on calves at Le Morne Estate.

Meat Inspection.—Abattoirs were inspected regularly, specially those of the districts. On two occasions carcasses seized for tuberculosis were maintained, a third one was also maintained for cachexia. Carcasses of two heifers under age were seized for illegal slaughtering, and the meat was placed at the disposal of the Poor Law Commissioner; the owners were prosecuted according to the regulations in force.

Mission to Réunion, Madagascar, Rodrigues.—Owing to the prevalence of contagious diseases in Bourbon and Madagascar, an official visit was paid to these countries. In Bourbon the disease which was prevailing on pigs was reported to be Swine Plague, but at the time of my visit no case was recorded.

In Madagascar an enquiry on the prevalence of Anthrax from villages where bullocks are brought for importation into this Colony proved that these places were free from this disease.

In Rodrigues a contagious disease on goats which caused the death of about 3,000 heads was carefully studied and was attributed to an ultra microscopical virus. Regulations re: the exportation of these animals from that Dependency were subsequently enforced.

STATISTICAL DIVISION

The Statistician reports as follows :—

Agricultural Statistics.—The Blue Book statistics relative to agriculture were supplied to Government. Statistical data were also supplied to the International Institute of Agriculture, Rome; to the Board of Trade, to the Colonial Secretary's Office, the Immigration Department, etc.

Quarterly reviews of local prices of certain essential articles together with index numbers were issued. Monthly reports on weather and crop conditions and forecasts of the sugar crop were prepared and submitted to Government and to various interested local bodies.

The results of the field experiments of the Department in relation to variety and manure tests were subjected to the usual statistical treatment for the determination of their measures of precision.

During the year, a compilation of the distribution and nature of cane varieties at present cultivated in the Colony was carried out.

Meteorological.—The meteorological service of the Department was continued on the same lines as heretofore. Observations of the temperature of air and of evaporation, soil temperature at depths of 3 in. 6 in. and 12 in. rainfall, continuous record of air temperature are taken at the Central Experiment Station, Réduit, while temperature of air and of evaporation and rainfall are observed at three secondary stations of the Department, viz: Royal Botanical Gardens, Pamplemousses, Abercrombie Nursery, Port Louis and Nursery Garden, Curepipe. In addition, most sugar estates contribute rainfall observations. All these data are reduced and co-ordinated to assist in the work of crop forecasting and for general agricultural questions connected with climatological factors.

Educational.—The general management of the Agricultural College was carried on as usual under the direction of the Principal, with the help of the College clerk.

Lectures in Physics were delivered once a week to the first year students, each lecture being followed by a laboratory period. Lectures in Applied Mathematics were delivered to the same students once a week and lectures in more advanced Physics delivered to second year students once a week.

Special Work.—The Statistician acted as Director of the Royal Alfred Observatory between December 12th, 1925 and September 15th, 1926.

SUGAR TECHNOLOGICAL DIVISION

The Sugar Technologist reports as follows :—

Cane Selection.—The second progeny from plots planted at Highlands in 1923 and selected last year (Bud selection following Mr. Shamel's method) was destroyed by an accidental fire. The mass selection plot, however, is showing some good stools which will serve as a new start for selection on Mr. Shamel's principle.

The mass selection plots at Rich Fund and Mon Desert were abandoned, the cyclone of April 19th having damaged too seriously the canes to permit of any further selection.

The progeny plot planted at Reduit last year from tops coming from the Medine Experiment Station is progressing and will be selected next year.

Visits to Factories and Investigations on Estates, etc.

Twenty two out of the forty four factories were visited during the grinding season, several of them on special request and repeatedly. Some particular points were studied and advice given.

During the crop, great difficulties were encountered with the defecation of the juice, in many factories, probably as a consequence of the abnormal climatic conditions; cyclone in April followed by a long wet season with temperature above normal. In one factory of the northern part of the Island, it was impossible to obtain a clear juice at the usual pH of 6.8—7.0. The precipitate did not settle at a pH higher than 6.0. The addition of a small amount of phosphoric acid improved conditions.

In the same factory there was a rapid growth of micro organism forming mucilaginous gummy substances, in the pipes carrying the raw juice from the mills to the sulphitation tank. The organism—a staphylococcus—has been isolated but not yet studied.

The Peck strainer was installed in three factories. After 24 hours work the filtering gauze was clogged by mucilaginous gummy substances and filtration stopped altogether. The matter was followed in one of the factories and the fact attributed to the rapid development of another micro organism—a short bacillus which has been isolated. The same organism was detected in the raw juice produced in a factory where there is no Peck strainer. This organism comes in probably with soil adhering to the cane and does not develop until special conditions occur—such as those prevailing in the case of the Peck strainer. These two points were studied with the courteous help of the Director of the Bacteriological Laboratory. In both cases there was no *leuconostoc* present.

The Roussel process (filtration of all the defecated juice without previous settling) worked very satisfactorily at Highlands, in spite of the bad quality of the cane.

In all the factories visited it was reported that juices were particularly susceptible to fermentation. Special care had to be taken for preservation of samples.

Lafeuille crystallizers were erected in two factories of the central plateau. Unfortunately no definite results have been obtained, because of mechanical difficulties. The work of these crystallizers, however, seems promising.

A water cooling device was placed in an open crystallizer in one factory. The purity of run off from B masse cuite reached a minimum after 19 hours against 96 in the air cooled crystallizers. Experiments with A masse cuite will be conducted next crop.

The Mauss vacuum cloth filter was tried at St. Aubin. It is reported that one of these can replace all the filter presses economically, in the factory.

It is worth noting that the quick running vacuum pump for evaporators and pans is being adopted by several factories. The first installation in the Colony was at Argy (Ingersoll Rand) which was put up in 1924 on the special advice of the Sugar Technologist. This year Savannah erected one built by The Mirreles Watson Cy, and others have been ordered from the same firm for next year.

The distilleries were also visited, one on special request, where advice was given and appreciated.

Controle Mutuel.—Thirty six out of the forty four factories contributed to the “Controle Mutuel” and returns regularly distributed fortnightly amongst the contributors. Many of these suggest that the name of the factories should be published, so as to give to the “controle” its full efficiency. This suggestion deserves consideration.

Educational.—A full course of lectures in Sugar Technology was delivered to the third year students of the College of Agriculture. Weekly lectures on Sugar House Chemistry and chemical control and on the cultivation of the sugar cane were delivered to the second year students. Practical demonstrations were given in the laboratory. Practical laboratory work was performed by the students after the lectures, under the supervision of the Sugar Technologist.

The second year students visited two sugar factories in detail during the crop and followed the work of the factories.

Mr. J. Vantrooijen, Assistant Director of the Reunion Agency of the “Société des Sucreries Coloniales” paid an official visit to the Colony in November, in connection with the sugar industry. He visited several factories with the Technologist and followed some of the research work in hand in this division.

TOBACCO DIVISION

The Tobacco Officer reports as follows:—

This division came into being during the past year on my secondment for duty as Tobacco Officer in January 1926 for one year, and this therefore is the first annual report.

At the commencement of the year under review planters could only cultivate tobacco under permit granted by the Department of Agriculture or by the payment of tax under Ordinance 19 of 1890, but during November this law was repealed and tobacco cultivation thrown open.

At the end of October, the last date for which figures are available the land under cultivation totalled 504 $\frac{3}{32}$ acres being distributed in the various districts as follows:—

PERMIT HOLDERS			
District	No. of permit holders	%	Acres for which permits granted
Flacq	427	82.1	217 $\frac{1}{2}$ acres or 44.74%
Black River	19	3.6	70 $\frac{1}{2}$ „ 14.52%
Pamplemousses	22	4.23	55 $\frac{1}{2}$ „ 11.51%
Plaines Wilhems	18	3.46	49 $\frac{1}{2}$ „ 10.11%
Riv. du Rempart	13	2.99	49 „ 10.11%
Moka	6	1.15	18 „ 3.70%
Port Louis	7	1.34	12 $\frac{1}{2}$ „ 2.51%
Grand Port	6	1.15	4 „ .82%
Total	520		485 $\frac{1}{2}$

The number of cultivators who had paid tax in the various districts for that period are as follows:—

District	No. of persons	Area
Flacq	95	12 20/32 acres
Riv. du Rempart	64	4 9/32 „
Pamplemousses	8	1 2/32 „
Plaines Wilhems	3	30/32 „
Port Louis	1	1/32 „
Black River	1	1/32 „
Total	172	18 31/32 „

This brings the total acreage under tobacco at the end of October to 504 $\frac{3}{32}$ acres, and from the foregoing table that almost 50% of the acreage is in the Flacq district, cultivated by more than 80% of the total number of cultivators. The average area per cultivator is however only .509 acre.

Since the repeal of Ordinance 19 of 1890 the increase in acreage has been very great, more so in the Pamplemousses, Rivière du Rempart and Black River districts than in others, although there is every likelihood of considerable increases in acreage in Plaines Wilhems, Flacq and even in Grand Port and Savanne. A conservative estimate of the acreage under cultivation at the end of the year is 800 acres.

The most outstanding event in the year was the carrying out of experiments in flue curing and bringing these to a successful conclusion. These experiments were carried out at Réduit by the Tobacco Division, and at Riche Terre by the British American Tobacco Company Ltd. with Blue Tobacco and in both cases a fairly high grade leaf was obtained. The success of these experiments has entirely altered the prospects of the industry and has placed it on a surer foundation. Further the considerable increase in acreage can be put down to these experiments which have given a great incentive to all tobacco growers.

The number of flue curing barns is constantly growing and at the end of the year they were being operated on the following estates:—

Solitude Estate, Riche Terre	...	...	2 barns
Bois Rouge Estate, Mapou	...	...	1 „
Grande Rivière Noire Estate, Black River	...	...	1 „
Mon Repos Estate, Black River	...	...	1 „
Haute Rive „ „	...	...	1 „
Malgré Tout „ „	...	...	1 „
Brickfields Calebasses, Pamplemousses	...	...	1 „
Central Experiment Station, Réduit	...	...	1 „
Total operating	...	9	„

These barns are in course of construction on the following estates:—

Versailles Estate, Riche Terre	...	...	1 barn
Bois Rouge „ Mapou	...	...	1 „
Petite Rivière Road	...	...	1 „
Total in course of construction	...	3	„

It is fully expected however that there will be a big increase in the number of barns during the next few months, as the efforts of all growers are being concentrated on the production of flue cured tobacco.

This rapid extension in the industry has called for a considerable amount of itinerary work, and in June the Agricultural Superintendent was seconded for three days a week to

assist in this work. During the year 826 visits have been made to growers throughout the Island. During October the itinerary staff was further increased by one assistant for the small indian growers in the Flacq district. This has had the effect of considerably improving the product of these small planters.

There has been a great demand for seed and planting material during the year and 3,863 grams of seed have been distributed and 49,750 plants sold to growers.

The following experiments commenced in 1925 were completed early in 1926. These experiments comprised variety trials at Pamplémousses and manurial experiments with two Virginian varieties at the Central Experiment Station, Réduit. The tabulated results are given in Appendix V Annexure I.

The results obtained at Pamplémousses will be seen to be rather poor, but the quality was fairly high. The low yields to a great extent, if not entirely, were due to dry weather immediately after planting and are not reliable for a normal season. Fire curing experiments were also carried out with one of the varieties *i.e.* Yellow Pryor, and good results were obtained; the other varieties were all air cured the results being fairly good considering that the curing was carried out during January when the relative humidity of the atmosphere was fairly high.

At the Central Experiment Station, Réduit, only the varieties Sterling and Joiner were utilised under different manurial treatments, with a view to ascertaining the effect on the composition of the leaf of the varying treatments.

Up to the present the percentage of chlorine and sulphates in local leaf has been high to the detriment of the burning qualities and these manurial experiments had as an object the determination of the effect of the manures on these factors.

The outstanding difference between the plots which received fertiliser and those which did not, was that the fertilised plots matured two weeks earlier than the unfertilised plots. Results however are not conclusive from this one experiment, especially as various factors interfered with the reaping of the plots—such as rainy weather, disease, etc.

The chemical analysis of the leaf is submitted in annexure I together with the results.

A further series of manurial experiments were laid down but the cyclone in April destroyed the whole plantation, and so no results are available.

Another series were laid down and a serious attack of nematodes rendered the plantation useless for results, in fact 75% to 80% of the plants were stunted in growth.

The following experiments were commenced during 1926 and completed during the year, and the results are tabulated in Appendix V, Annexure II.

The first experiment was a varietal comparative trial with new varieties received from Nyasaland, *i.e.* Gold Leaf, Blue Pryor, Root Rot Resistant Burley, and Heavy Hanover Burley. In the case of Gold Leaf two plots were planted, one 3' x 3' the other 3' x 2', the difference in yield calculated on area will be seen to be very little, also there was no difference worth recording in the quality of the leaf produced. The difference is quite sufficient to cover the extra labour for planting.

The varieties Gold Leaf and Blue Pryor were fire cured and good results obtained, it was from this leaf that samples were drawn to be sent to brokers in London, the result of which will be dealt with later.

The Root Rot Resistant Burley was air cured and good results were obtained, the yield was very good.

The Heavy Hanover Burley almost failed and the results are therefore not included, the cause of the failure being dry weather immediately after planting.

The second experiment was with Blue tobacco which was planted for seed selection. It was only included as experiment as a certain number of leaves were harvested for the first experiment in flue curing carried out on the Island, this experiment was a success. No results are however obtainable as the whole of the leaves could not be harvested, as the majority of the plants were utilised for seed.

A third experiment was commenced in August but the curing is not yet complete and results are not available.

During the year work was commenced on the new experimental station at Beau Bassin, at which tobacco experiments will be the chief feature.

Work on a demonstration plot at Argy was also commenced.

As a result of the experiments, samples, of leaf were forwarded to brokers in London for valuation. They report that the samples forwarded would be worth as follows.—

					per lb
A.	Flue cured, bright	1st grade	...	2/6 to 2/9	
B.	"	2nd "	...	2/3	
C.	"	1st " green	...	If green considerably eliminated little less than B.	
D.	"	2nd " "	...	1/9	
E.	"	perished	...	1/6	
F.	Fire	1st grade	...	1/6	
G.	Air	1st grade red	...	1/8	
H.	"	1st " light red	...	1/7 to 1/9	} Blue tobacco
J.	"	1st " red	...	1/6	
					Constant

From the above figures it will be seen that there is a future for the tobacco industry here.

It is only natural that diseases have made an appearance on tobacco, which though present before were overlooked, but the added interest in tobacco and the extension of the cultivation has brought them to notice. The chief diseases encountered during the year are :—Mosaic disease which is widespread throughout the Island, though not difficult to control is propagated by the pernicious habit of ratooning and in cases where virgins are attacked the attack can be traced back to ratoons.

There have also been leaf spotting caused by *Cercospora* sp, a bacterial leaf spot in the Flacq district, non parasitic leaf spot widely spread, especially prevalent during the cold wet weather, and angular leaf spot caused by *Bacterium angulatum* suspected in a few cases but not proved.

Granville wilt has also occurred in several plantations, this is caused by *Bacterium solanacearum*.

One or two cases of *Fusarium* wilt have also been brought to notice, but this is not very common.

One case of Hollow Stalk was brought to notice, this is believed to be caused by *Bacillus carotovus*.

There was also a suspected case of Sand Drown or a chlorosis of similar nature brought to notice.

During the year the following publications have been prepared, printed and circulated :—

Bulletin No. 33 Tobacco. Its cultivation and preparation.

Leaflet No. 17 Conseils sur la culture et la preparation du tabac.

„ No. 20 The curing of tobacco by the Flue curing process.

Lectures on tobacco and the preparation of other agricultural products were delivered to the third year students at the Agricultural College.

Tobacco Factory.—The past year has been the most successful year recorded at the factory, and quite a fair profit has resulted. The sales are the highest on record and it was unfortunate that they had to be curtailed owing to lack of supplies in June last.

The outstanding feature was the placing on the market of a yellow cigarette made from local tobacco and which found a ready sale, the entire stock being sold out in three months.

YEARLY SALES

	1924	1925	1926
Tobacco ...	2,220.5 Ks.	3,236.5 Ks.	4,859.875 Ks.
Dodo Cigarettes ...	4,271 tins	5,327 tins	3,019 tins
Dodo "B" Cigarettes ...	...	...	1,801 tins

The purchases of leaf are also the highest recorded, 13,843.3 kilos having been purchased from growers, at an average price of Rs. 1.05 per kilo. These purchases are I think approximately $\frac{1}{4}$ th of the total production of the Island during the past year. The total production of the Island for 1916 being approximately 90,000 kilos.

The annual statement for factory is annexed. (Appendix V) and from which it will be seen that a profit of Rs. 7,551.35 cs. was made. This profit would have been higher had stock not been written down in value towards the end of the year; this was necessary owing to the reduction in the selling price of tobacco.

The stocks on hand are slightly in excess of the stocks at the beginning of the year.

At the Agricultural and Industrial Exhibition held in October the Tobacco Division had a comprehensive exhibit of manufactured and unmanufactured tobaccos.

Different grades of flue cured, fire cured and air cured leaf were exhibited, also a model of a flue curing barn and plans, specimens of various diseases, etc.

The different types of manufactured tobacco included Dodo and Dodo "B" cigarettes, the latter being awarded a bronze medal, and black shag tobacco.

During the first two days of the Show, cigarettes were manufactured from local leaf and distributed to visitors.

Literature was also distributed and an officer of the division was always present to give information to those interested.

The past year also saw the erection of a tobacco factory in Port Louis by the British American Tobacco Company (Mauritius) Ltd. for the manufacture of cigarettes.

This firm have two leaf experts here to teach growers the new methods of curing. These facts combined with the intensive propaganda work carried out by the Department of Agriculture are responsible for the increased production and interest in this crop.

AGRICULTURAL AND EXPERIMENT STATION DIVISION

The Chief Agricultural Officer and the Agricultural Superintendent report as follows :—

Experiment Stations

Experiments with canes.—As in previous years experiments with cane varieties were carried on in different parts of the Island.

Cane varieties were reaped at Réduit, Pamplemousses, Queen Victoria, Highlands, Britannia, Long Mountain and Labourdonnais.

The following services of bulls were recorded at the Stock Farm:

Pure breed Ongole Hathi II	...	...	1
" Holstein Friesland-Réduit Chieftain	...	...	2
$\frac{3}{4}$ breed Holstein Friesland-Maritzburg	...	...	16
Pure breed Mysore--Nizan II	...	...	1
" Hissar--Amir VIII	...	...	3
Total	...	...	23

Poultry and Rabbitry.—No progress was made at the Poultry and Rabbitry. The hens being too old, it was decided to replace them and new poultry ordered, but it has not been received as yet.

A serious outbreak of coccidiosis at the Rabbitry has destroyed a large number of the rabbits and guinea pigs.

Roads and Buildings.—All roads and buildings belonging to the Department have been kept in good condition.

The Agricultural Superintendent and Overseer's quarters have been repaired and the Agricultural Superintendent's quarters also repainted.

Medine Irrigation Experiment Station.—The Medine Irrigation Experiment Station was closed in February.

Royal Botanical Gardens Pamplémousses.—The work of improvement in these gardens was continued during the year. A collection of selected ornamental trees was planted on the site of the filled up pond near "Mon Plaisir."

Young seedlings were planted to replace vacancies along the different palm avenues.

The two plant sheds in the Nursery were repaired, painted and fenced with wire netting.

Stone platforms were erected inside to replace the worn out iron shelves. New varieties of ferns, begonias, gloxinias, etc, were added to the collection of ornamental plants.

The lawns were often mown and swept. All lakes, canals, avenues, paths and beds were regularly cleaned.

The Eucalyptus plantation made at "Mon Plaisir" last year was weeded; a certain number of young plants have died where the tap root met the shallow rock bottom.

298 mango grafts of good varieties and 285 letchis layers were made and sent to Abercrombie Nursery for sale to the public.

The Police Band played several times at the Gardens before a large attendance of visitors.

Several pic-nics were held and many persons visited the Gardens during the year.

A Seychelles tortoise was presented to the Gardens by Mr. J. Closel.

At the invitation of the Director of Agriculture several elected and nominated unofficial members of the Council of Government visited the Gardens on the 30th of November. They expressed their appreciation of the well kept state of the gardens.

Curepipe Gardens.—Several new beds were made in the vicinity of the office; they were planted with selected varieties of roses.

All the privet (*Ligustrum*) hedges and unsightly trees growing in the flower garden were removed and the cleared space grassed over. This work has considerably added to the appearance of the Gardens.

The kiosk in the Fernery was repaired and a new galvanized iron roof put on.

200 young seedlings of "Chaulmoogra" (*Hydnocarpus Wightiana*) were raised from seeds received from India.

A large number of budded roses, palms and other seedlings were raised in the Nursery.

The sale of flowers and plants amounted to Rs. 462.75 cs.

Le Réduit Grounds.—These grounds were maintained in good condition. Seedlings of Gloxinia, Begonias, Cyclamens and Primulas were successfully raised. The collection of roses was increased by budding other varieties.

Vegetables were supplied to Government House throughout the year.

The two stone pillars at the main entrance were pulled down and re-erected several feet away on each side, in order to allow the widening of the avenue.

Abercrombie Nursery.—The sale of fruit trees, ornamental and economic plants to the public amounted to Rs. 4,212.25 cs. an increase of Rs. 1,885 over the preceding year. 2,710 plants were supplied free to Government Institutions and 110 given in exchange.

Mr. Gabriel Regnard gave seeds of palms, fruit trees and orchids from Madagascar.

Suckers of Kew Pines were received from South Africa; these together with plants of local varieties are being propagated for sale to the public.

A large silver medal was obtained at the Agricultural Exhibition for a collection of Coleus plants.

Experimental Station, Beau Bassin—Towards the end of the year, this Department took over from the Medical and Health Department, part of the land formerly belonging to Barkly Asylum. It is proposed to establish an experimental station there, for trials with tobacco, sugar cane and other economics. A nursery for raising fruit trees, etc. for sale to the public will also be established.

Co-operative Credit Societies—The Registrar in a separate annual report gives an account of the work done by these Societies.

Maize Secherie—This Secherie was not operated during the year.

School Gardens—These gardens were regularly visited by the Chief Agricultural Officer. It is a pleasure to record that constant progress is being made in their upkeep. Two new gardens viz : at Camp Diable, Savanne and Sebastopol were registered during the year.

The following were prizes awarded to the best kept gardens :—

1st prize of Rs. 50 to Plaisance Orphanage	
2nd " 40 to Highlands Aided School	
3rd " 35 to Old Grand Port Convent School	
4th " 30 to Riviere des Anguilles Government School	
5th " 25 to Palma Aided School	
6th " 20 to Quatre Bornes Aided School	

Exhibits from School Gardens were sent to the Agricultural Exhibition, and several prizes obtained. The large silver medal for the best collection of vegetables was awarded to Quatre Bornes Government School.

Food Settlements—The shareholders of the St. Martin Co-operative Credit Society leased one acre plots at St. Martin and St. Thomas, which they planted with maize, manioc and other food crops. The yields obtained were satisfactory.

Government Dairy, Curepipe, —Yield of Milk.—The yield for 1926 reached 93,504 litres showing an increase of 18,887 on 1925 and 44,837 on 1924.

The above quantity was disposed of as follows :—

Supplied to Government Institutions ...	...	75,164
Sold to Public...	...	6,325
Fed to Calves...	...	10,122
Samples for control—analysis and otherwise	...	1,893

Births.—31 births were registered comprising 15 males and 16 females.

Deaths.—5 deaths occurred on calves—1 from peritonitis and from congenital weakness.

10 deaths occurred on cows—2 from pneumonia, 2 from dipping poisoning, 1 from meteorism, 1 from prolapsus uteri and 4 from an ill defined disease which prevailed during several months and which affected 30 animals out of which 26 recovered.

Abortion.—Six cases of abortion were recorded during the year.

Sales.—12 cows were sold as being of no utility to the Dairy, 5 were sold out of which 3 were ascertained to be farrow and 2 on account of their old age.

Enlargements.—10 cows and 1 bull were received from the Barkly Asylum in March and one cow from Reduit Stock Farm.

One bull was also imported from South Africa in October to replace the old one which was transferred to Reduit.

The erection of a new stable was started in October. It is intended for accommodating 14 heifers.

French drains started in 1925 are being completed for the absorption of soiled waters from the stables.

RODRIGUES

The Acting Agricultural Superintendent reports as follows :—

Climatic and Agricultural Conditions.—Crops were much damaged by the cyclone of the 17th April. On the 10th May heavy rains, caused by a thunder storm, again damaged the plantations and washed away a considerable amount of surface soil from the fields.

During June and July continuous rains kept the soil in an unfavourable condition for plant growth and prevented any successful sowing being made.

During September and up to the 20th October practically no rain was recorded, the result was another stop to the vegetation.

The Crops, on the whole, were greatly reduced and towards the end of the year the inhabitants had very little locally grown foodstuffs left, and were obliged to buy imported rice.

The rainfall has been abnormal this year, as can be seen from the following figures taken at Oyster Bay :—

Normal rainfall from Mauritius Almanach 44.55 inches.

Year	1923	1924	1925	1926
	29.90 ins.	32.26 ins.	35.12 ins.	69.89 ins.

The rainfall during 1926 was as follows :—

	Oyster Bay	La Ferme
January ...	6.49 ins.	4.53 ins.
February ...	4.33 "	3.74 "
March ...	3.11 "	2.68 "
April ...	22.35 "	17.01 "
May ...	6.90 "	2.82 "
June ...	6.24 "	5.69 "
July ...	7.13 "	3.74 "
August ...	4.18 "	2.36 "
September ...	0.39 "	0.30 "
October ...	1.58 "	0.59 "
November ...	1.99 "	1.04 "
December ...	5.20 "	2.17 "
	69.89 ins.	46.67 ins.

Work in the Experimental Station.—The tobacco drying shed has been extended to cope with the large amount of leaves cut this year. All sheds were repaired.

Drains in the Experiment Station have been remade and protected by dry masonry.

The road from the Jetty to the Experiment Station was raised and a bridge built.

The Jetty and paddocks were repaired after the cyclone.

The plantation of Kikuyu grass in the Coconut plantation was extended.

Maize.—Sown on the 28th January 1926. Badly damaged by cyclone and yielded 792 lbs of dry seed per acre.

Sown on the 13th May 1926. Yielded 2,132 lbs dry seed per acre.

Cotton—Long Staple Upland.—Sown on the 24th April 1925. Yielded 64 lbs stained and 114 lbs clean cotton per acre.

Sown 7th January 1926. Destroyed by cyclone.

Sown 20th May 1926. Growing fairly well.

Sea Island.—Sown on the 7th January 1926. Destroyed by the cyclone.

Sown on the 20th May 1926. Growing well.

Onions.—Sown on the 27th April 1926, and yielded 4,224 lbs per acre.

Tobacco—Connecticut Brodleaf.—Sown 30th November 1925. Destroyed by cyclone.

Zimmer Spanish.—Sown 12th January 1926. Destroyed by cyclone.

Sown 18th August 1926. Results not available.

Yellow Pryor.—Sown on the 14th November 1925. Yielded 924 lbs of dry leaves per acre.

Joiner.—Sown 14th November 1925, and yielded 1,176 lbs of dry leaves per acre.

Sown 14th September 1926. Results not available.

Sterling.—Sown 30th November 1925. Destroyed by cyclone.

Sown 18th August 1926. Results not available.

Blue Tobacco.—Sown 12th January 1926. Destroyed by cyclone.

Sown 14th September 1926. Results not available.

R.R.R. Burley.—Sown 19th October 1925. Badly damaged by rain water in drying shed during cyclone and yielded 294 lbs of dry leaves per acre.

H.H. Burley.—Sown 28th October 1925. Damaged by rain water in drying shed during cyclone and yielded 546 lbs of dry leaves per acre.

Blue Pryor.—Sown 1st November 1925. Damaged by rain water in the drying shed during cyclone and yielded 762 lbs of dry leaves per acre.

Sown 13th July 1926. Results not available.

Gold Leaf.—Sown 14th November 1925. Damaged by rain water in the drying shed and yielded 528 lbs of dry leaves per acre.

Sown 14th September 1926. Results not available.

Cuban.—Sown 30th November 1925. Destroyed by cyclone.

Manioc.—Twenty varieties were experimented with. Planted on the 25th April 1925 and harvested on the 1st to the 4th March 1926.

Yields, in pounds per acre, were as follows :—

Icery ...	11,680 lbs.	Negrita No. 12 ...	8,800 lbs.
Negrita No. 15 ...	5,520	Cassava Bureum ...	10,400
Trinidad No. 3 ...	3,680	Paloma ...	7,360
Bitter Sticks ...	4,480	Blanchite ...	5,200
Rodney ...	8,560	Australie ...	6,880
Singapore ...	15,529	F. M. States ...	7,200
Smallings ...	5,440	Trinidad No. 2 ..	5,120
Cabesa Dura ...	8,960	No. 29 ...	7,520
Blue Tops ...	5,760	Pacho No. 3 ...	2,560
Constantin ..	6,800	Bitter ...	5,760

Pistaches.—Planted on the 14th January, 1926 and yielded as follows. Results in lbs. per acre :—

Virginia Bunch	... 1,826 lbs.	Virginia	... 1,804 lbs.
Virginia Running	... 1,936	Bunch	... 1,672
Spanish Pea Nut	... 2,335	Gambia	... 1,232
Refusque	... 1,726	Local	... 2,031
Tennessee	... 396		

Sweet Potatoes.—Planted on the 18th August 1925 and harvested on the 29th July 1926. Yields, given in pounds per acre, were as follows :—

Pierson	... 17,358 lbs.	T. 3	... 2,904 lbs.
Egyptian Bebai	... 4,686	Barbadoes Barrel	... 5,478
T. 4	... 2,442	Egyptian White	... 4,488
Rouge	... 3,168	No. 4	... 2,970
Red Bermuda	... 13,662	Turkey Claws	... 5,280
Spooner	... 11,880	Chully	... 4,620
No. 5	... 2,244	Joes	... 6,534
Jersey	... 2,640	Sealys Seedling	... 3,498
Blanche	... 2,244	Georgia Yam	... 1,716

Mangels.—Variety Long Red sown on the 14th May, 1926, and yielded 29,608 lbs. of roots per acre.

Variety Yellow Globe sown on the 14th May, 1926, and yielded 35,120 lbs. per acre.

Orchard.—Over twenty five per cent of the Coffee trees were lost owing to the cyclone.

Stock Farm

Catalonian Donkeys

Births	... 3 Jacks, 2 Jennies.
Deaths	... 1 Jack, 1 Jenny and 1 Jack foal.
Sold	... 1 Jack, 1 Jenny.
Shipped to Mauritius	2 Jacks, 1 Jenny.
Present Number	6 Jacks, 19 Jennies.

Sindhi Cattle

Births	... 1 Bull, 1 Heifer.
Deaths	... 1 Calf.
Sold	... 2 Bulls.
Present Number	2 Bulls, 2 Cows and 3 Bull calves.

Pigs

Middle Whites

Births	... Nil
Deaths	... 4 Boars and 2 Sows.
Present Number	... Nil

Large Blacks

Births	... 2 Boars, 3 Sows.
Deaths	... 3 Boars, 4 Sows.
Present Number	... 4 Boars, 3 Sows.

Nigerian Sheep

Births	... 77
Deaths	... 11
Sold	... 41
Present Number	... 145

Poultry

Present Number ... 2 White Plymouth Rock cocks and 25 cocks & hens (crossed).

Trefles Co-operative Credit Society.—Three loans amounting to Rs. 178.05 in principal and interest were paid in during 1926.

Three more applications for loans viz : Rs. 80, Rs. 50 and Rs. 50 were granted by the Committee on the 13th November 1926.

Assets of the Society

Loans	... Rs. 180.00
In Bank	... 56.41

Total ... Rs. 236.41

Sale of Produce

Forest Produce	... Rs. 2,223.44
Miscellaneous	... 29.65
From Experimental Station	... 598.06
Total	... Rs. 2,851.15

Exports.—Shipped to Mauritius by the Secunder.

Accacia seeds, 9,206 bags, Bean 334 bags, Garlic 296 bags, Salt Fish 3,735 bales.
Cuttle Fish 780 bales, Tobacco 595 bales, Goats and Sheep 2,450, Pigs 1,661 and Cattle 707,

Reafforestation.—New plantations made during the year :

Bois Noir	9,000	Filao	550
Badamier	1,600	Jamrosa	4,000
Bois d'Olive	600	Bois d'Oiseau	1,600
Jack	600	Pomme Singe	25,900
Juniper	50	French Bois Noir	13,182
Vitex	8,210	T. Arjuna	10,850
Mahogany	925		

Recruiting

Jamrosa	2,400	Juniper	400
Bois Noir	3,400	T. Arjuna	2,675
F. Bois Noir	1,230	Badamier	400

BOARD OF AGRICULTURE

The Board of Agriculture established under Ordinance 30 of 1912 consists of :—

His Excellency the Governor, President.

The Director of Agriculture, Vice President.

The following members were appointed in 1926 :—

The Honourable Louis Noël	L. H. de Froberville Esquire,
" M. Martin	H. G. Ducray Esquire
" R. Gujadhur	A. Hugnin Esquire,
J. A. Duclos Esquire, C.M.G.,	J. J. Gibson Esquire,
G. Antelme Esquire,	E. Rouillard Esquire,
M. d'Unienville Esquire,	Gabriel Régnard Esquire,
G. Clarenc Esquire,	Adrien Wiehe Esquire,
M. Lagesse Esquire,	F. A. Nicholls Esquire,
J. de Spéville Esquire	Pundit Boleram Mookteram Esquire,

During the year 1926 there were three meetings of the Board held on February 10th, March 31st and August 27th respectively.

At these meetings the following questions were discussed :—

Meeting of February 10th—Tobacco industry in Mauritius.

Meeting of March 31st.—1. Agricultural Show at Port Louis.

2. Streak disease of sugar cane.

3. Top Rot of the sugar cane.

4. Report on Phytalus Campaign.

Meeting of August 27th.—Island's meat supply and control of tuberculosis on bovines.

PUBLICATIONS

The following publications were issued during the year :—

BULLETINS

1. Diseases of Sugar Cane in Mauritius.
2. Tobacco—Its Cultivation and Preparation.
3. Animal Diseases Regulations with Notes on Diagnoses.
4. Handbook and Guide to the Botanical Gardens of Mauritius together with a list of plants growing in the Gardens.
5. Report on the results obtained at the Government Experiment Station for the investigation of problems connected with the Irrigation of Sugar Cane at Medine.
6. Experiments with Varieties of Food Crops conducted by the Department of Agriculture 1921–26.
7. The Reversion of Nitrates in the Soil under cultural conditions in Mauritius.

LEAFLETS

8. Conseils sur la Culture et la Preparation du Tabac.
9. Notes sur les Borers de la Canne a Sucre.
10. Notes sur la Peste porcine.

The following reports and memoranda were prepared and submitted to the Council of Government and to the Board of Agriculture :—

Annual Report of the Department of Agriculture for 1925.

Report on Co-operative Credit Societies to 30.6.1925.

Report on Mr. Corbett's tour in South Africa.

The following articles from Officers of this Department were published in the *Revue Agricole* :—

Les Lapereaux	...	...	D. d'Emmerez de Charmoy
A propos de rations de ponte	..	...	"
Traitement de la diphterie aviaire	...	...	"
La grippe ou coryza des poules	...	...	"
Pour la conservation des pommes de terre	...	...	"
La production des mulards	...	...	"
Notes sur la composition d'une ration de production	...	...	"
Nouveau moyen pour combattre la fourmi rouge	...	...	"
L'utilisation du Chloryl dans la lutte contre les insectes nuisibles	...	...	"
Les oeufs de cane	...	...	"
Reproduction et Selection	...	...	"
Les porcs	...	...	Y. Lefebure
Précis de cyclonomie pratique	...	...	M. Koenig
Le Temps et la Coupe	...	...	"
Le cyclone du 19 Avril	...	...	"
Revue Meteorologique	...	...	"
La Coupe et le temps	...	...	"
Le Tabac, Choix des Graines	...	...	G. Corbett
Conseil sur la Culture et la Preparation du Tabac	...	...	"
Ce qu'il importe de connaitre sur les methodes de destruction employées contre les insectes	...	...	W. H. Edwards
La mouche domestique	...	...	A. Moutia
Notes sur les maladies du tabac	...	...	E. F. S. Shepherd
L'acidite du sol et ses rapports avec la toxicite par l'Aluminium et la pourriture de la racine	...	...	N. Craig
De l'utilisation des phosphates dans les sols d'acidite moyenne	...	...	"
Extrait du Rapport Annuel du Departement de L'agriculture	...	...	H. A. Tempany
Appareil de Peck	...	...	L. Baissac
Notes sur la Coupe	...	...	"

LEGISLATION

The following Ordinances, Proclamations and Notifications were issued during the year :—

Ordinance No. 13 of 1926—To repeal Ordinances No. 19 of 1890 and No. 20 of 1920 and to authorize the Receiver General to refund certain taxes paid on land cultivated in tobacco.

Ordinance No. 15 of 1926—To empower the Colonial Government to raise a loan not exceeding the sum of Rs. 5,000,000 for the purpose of assisting the Sugar Industry of the Colony.

Ordinance No. 24 of 1926—To validate a resolution passed by the Council of Government and certain import duties levied on unmanufactured tobacco and on tobacco grown and produced in the Dependencies and to amend Schedule B of the Customs Consolidated Tariff Ordinance 1908.

Ordinance No. 28 of 1926—To amend the Mauritius Hemp Producers Syndicate Ordinance 1925.

Ordinance No. 29 of 1926—To amend the Societé des Chimistes de Maurice Ordinance 1925.

Proclamation No. 11 of 1926—Occurrence of *Phytalus Smithi* in certain parts of the district of Savanne.

Proclamation No. 19 of 1926—To add tobacco to item 80 of Schedule B of Ordinance No. 14 of 1908.

Proclamation No. 29 of 1926—To remit stamp duties and registration fees chargeable on instruments executed by or on behalf of the Ruisseau Rose Co-operative Credit Society.

Proclamation No. 31 of 1926—To prescribe the conditions under which tobacco seeds may be imported into Mauritius.

Government Notification No. 81 of 1926—Rule made under Co-operative Credit Societies Ordinance 1913.

Government Notification No. 103 of 1926—Tariff charges for chemical analyses.

Government Notification No. 117 and 256 of 1926—Regulations for the selection of Laureates, College of Agriculture.

Government Notification No. 297 of 1926—Prohibition of the importation into Mauritius of goats from Rodrigues Animal Diseases (Consolidation) Ordinance 1925.

EXPENDITURE AND RECEIPTS

The expenditure and receipts of the Department have been as follows :—

	Rs.	cs.
Personal Emoluments ...	82,588.30	
Maintenance of Gardens ...	15,468.90	
General Services ...	1,392.48	
Prevention of Plant Pests and Diseases ...	4,619.62	
Prevention of Animal Diseases ...	2,071.96	
Upkeep of Stock ...	7,131.31	
Establishment of Demonstration Plots ...	358.20	
Subvention to Societe Horticole ...	1,000.00	
Travelling Expenses ...	9,497.49	
Miscellaneous Expenses Co-operative Credit Societies ...	24.84	
Maintenance of Food Plantations ...	854.80	
Maintenance of Experiment Stations ...	14,744.17	
Minor Industries ...	18,857.02	
Apparatus and Chemicals ...	3,294.86	
Nursery for economic plants ...	1,725.79	
Registration of Chemists Examination ...	4.33	
Destruction of Phytalus Smithi ...	56,957.33	
Experimental Station for Irrigation of canes ...	601.89	
Upkeep of plantation at Flôreal ...	448.18	
Dairy { Capital Expenditure ...	1,789.14	
{ Upkeep Expenses ...	30,560.47	
Agricultural Shows ...	2,400.00	
Installation of Experiment Station, Beau Bassin ...	108.16	
Improvement to Laboratories ...	620.45	
Services rendered by the Railways ...	7,315.62	
Purchase of raw tobacco ...	14,874.85	
Total ...	279,310.16	

The receipts were :—

Sale of flowers and plants ...	4,740.64
Sale of Stock ...	1,129.50
Services of animals ...	35.00
Sale of eggs and poultry ...	222.36
Sale of milk, Cattle Station ...	1,637.60
Sale of canes ...	4,231.47
Analytical fees ...	505.50
Miscellaneous ...	745.22
Rent of Tea Plantation ...	500.00
Sale of tobacco ...	28,980.37
Contribution C.C.S. ...	1,219.75
Veterinary Fees (Customs) ...	1,058.00
Destruction of Phytalus Smithi (Customs) ...	36,243.15
Loans repaid by Co-operative Credit Societies ...	3,560.00
Interest on loans ...	142.40
Rent of Crown Lands at La Ferme and St. Martin ...	283.50
Sale of produce, Experimental Dairy ...	32,269.31
Sale of Sisal Fibre ...	2,847.35
Total ...	120,351.12

GENERAL

The Director of Agriculture continued to serve as a nominated member of the Council of Government, and as a member of the Forest Board. He also served as a member of the Fisheries Enquiries' Commission and of various Government Committees, and as Organising Vice President of the Agricultural Exhibition.

The Assistant Director served as a member of the Board of Director of the Mauritius Institute and as a member of the Fisheries Commission.

May 10th, 1927.

H. TEMPANY,
Director of Agriculture.

APPENDICES

- Appendix I—Meteorological data at the Departmental Stations.
 " II—Return of yields of Minor Economic Crops at Reduit and Pamplémousses.
 " III—Return of yields of Milk from cows at the Government Dairy.
 " IV—Distribution of Sugar Cane Diseases in Mauritius in 1926.
 " V—Experiments with Tobacco and Statement of Accounts of the Government Tobacco Factory for 1926.

APPENDIX I.

METEOROLOGICAL OBSERVATIONS MADE AT THE STATIONS UNDER THE CONTROL OF THE DEPARTMENT OF AGRICULTURE FOR THE YEAR 1926.

Stations	Réduit						Curepipe						Abercrombie						Pamplémousses	
	Temperature			Relative Humidity	Rainfall		Temperature			Relative Humidity	Rainfall		Temperature			Relative Humidity	Rainfall		Depth of rain	No. of days
	Max.	Min.	Mean		Depth of rain	No. of days	Max.	Min.			Depth of rain	No. of days	Max.	Min.			Depth of rain	No. of days		
Months	°C	°C	°C	%	m/m		°C	°C	%	m/m		°C	°C	%	m/m		m/m			
January	28.5	22.3	24.9	74	151.6	25	24.5	20.4	86	350.5	28	31.7	24.2	63	98.5	13	106.7			17
February	28.7	21.8	24.6	74	123.6	23	24.5	20.5	87	204.0	24	31.5	24.4	63	103.0	14	97.5			16
March	28.7	20.8	24.2	70	96.3	22	24.7	19.9	86	223.0	26	32.7	23.6	60	71.5	10	49.8			7
April	27.3	20.9	23.4	75	295.5	30	23.3	19.6	88	627.5	29	29.6	23.1	63	312.0	14	248.5			21
May	24.9	17.6	20.7	76	117.4	30	20.6	15.9	89	273.8	29	27.4	19.6	67	111.5	12	149.8			18
June	23.1	16.7	19.5	78	71.6	27	19.1	15.3	90	340.2	30	25.9	19.7	65	49.5	18	89.5			23
July	22.6	16.1	18.9	72	116.3	27	18.5	15.4	87	303.0	29	25.5	18.0	61	75.2	15	109.8			18
August	22.3	16.4	18.9	77	120.5	25	18.6	15.5	89	309.5	27	25.5	19.2	65	80.0	12	114.0			13
September	24.1	15.9	19.5	67	9.5	16	19.6	14.1	84	63.3	23	27.5	18.7	58	4.6	5	6.2			4
October	25.1	15.5	20.0	62	44.0	22	20.1	14.3	77	105.2	22	28.4	18.1	54	28.2	6	29.8			6
November	26.3	18.3	21.7	69	182.1	22	22.0	16.6	80	440.1	19	29.0	22.0	65	172.7	10	212.5			12
December	27.8	20.3	23.4	67	187.1	25	23.1	18.4	85	317.0	25	30.8	21.9	63	87.5	14	174.3			6
Year	25.8	18.5	21.6	72	1515.5	294	21.5	17.2	86	3557.3	311	28.8	21.0	63	1194.1	143	1388.4			166
					Total					Total					Total		Total			

Remarks :—The figures for relative humidity are obtained from the means of readings taken daily at 10 h. and 15 h. Temperature at Réduit is derived from the hourly measurements given by a thermograph standardised daily at 6 h., 10 h. and 15 h.

APPENDIX II.

Results of experiments with Economics other than sugar cane at the Central Experiment Station, Reduit, and the Royal Botanical Gardens, Pamplémousses, during the season 1926.

Name of variety	Reduit Ks. per acre	Pamplémousses Ks. per acre	Mean Ks. per acre
<i>Experiments with Eddoes and Tannias</i>			
Tannia blanche	22,400	...	22,400
Tannia yellow	31,280	3,740	17,510
Tannia white	22,780	4,760	13,770
Tannia Priete	22,780	3,060	12,920
Tannia blanca	20,600	4,080	12,340
Tannia boliza	20,700	3,740	12,220
Eddoe dasheen	18,360	4,760	11,560
Violet	340	...	340
<i>Experiments with yams</i>			
Crops	5,602	5,913	5,757
Sealed top	5,553	5,713	5,633
Oriental	4,608	6,563	5,585
Bottle neck	5,100	4,836	4,968
Lisbon	3,639	4,087	3,863
Cush cush	2,967	4,000	3,483
Iberns	4,776	1,888	3,332
Danish	1,066	5,288	3,177
Fugue	2,890	3,160	3,025
Bugle horn	4,892	531	2,711
Light red	1,112	3,934	2,523
Cush	585	2,817	1,701

Name of variety				Reduit Ks. per acre	Pamplemousses Ks. per acre	Mean Ks. per acre
<i>Experiments with Manioc</i>						
Yellow bell	...	...	...	...	9,031	9,031
Cabesadura	...	...	...	...	5,950	5,950
Pacho 3	...	...	...	...	5,843	5,843
Trinidad	...	...	...	...	5,780	5,780
Constantin	...	...	...	5,440	4,250	4,845
Cassava bureum	...	...	...	3,740	5,631	4,685
Bitter ...	...	...	...	...	4,250	4,250
Bobby handsome	...	...	...	...	4,250	4,250
Cotton tree	...	...	...	...	3,931	3,931
Icery ...	...	...	...	3,060	4,143	3,601
Rodney	...	...	...	...	3,506	3,506
Mullings	...	...	...	...	3,400	3,400
No. 29...	...	...	...	...	3,400	3,400
Negrita 11	...	...	...	...	3,293	3,293
Manioc de table No. 2	...	...	...	3,060	...	3,060
Blue beard white	...	...	...	...	2,890	2,890
Negrita 12	...	...	...	1,360	3,612	2,486
" 17	...	...	...	2,040	2,868	2,454
Bunch of meys	...	...	...	...	2,443	2,443
Trinidad II	...	...	...	1,020	3,506	2,263
Singapore	...	...	...	2,040	2,337	2,188
Manioc de table	...	...	...	1,700	2,201	1,965
Trinidad I	...	...	...	1,360	2,550	1,955
Paloma	...	...	...	1,020	2,868	1,944
Australie	...	...	...	1,700	1,864	1,782
Blue Top	...	...	...	...	1,381	1,381
Smallings	...	...	...	...	1,062	1,062
Trinidad III	...	...	...	680	1,593	1,136
Federated Malay States	...	...	...	680	1,487	1,083
Blanchite	...	...	...	...	956	956
Butter Stick	...	...	...	680	1,168	924
Negrita 15	...	...	...	340	1,168	754

Experiments with Ground Nuts

Virginia running	...	...	...	3,229	2,199	2,714
Big Japanese	...	...	...	2,348	...	2,348
Virginia Bunch	...	...	...	2,796	1,812	2,304
Virginie	...	...	...	1,359	2,629	1,994
Spanish Peanut	...	...	...	2,403	1,354	1,878
Local ...	...	...	...	2,446	1,218	1,832
Gambia	...	...	...	2,026	1,284	1,655
Refusque	...	...	...	...	1,002	1,002
Bunch	...	...	...	...	966	966
Tennessee	...	...	...	920	190	555

Name of variety				Reduit Ks. per acre	Pamplemousses Ks. per acre	Mean Ks. per acre
<i>Experiments with Maize</i>						
22 rows impure	...	...	...	417	...	417
20 " "	...	...	...	626	...	626
18 " "	...	...	...	1,054	...	1,054
18 " pure	...	...	...	725	...	725
16 " impure	...	...	...	490	...	490
16 " pure	...	...	...	98	...	98
14 " "	...	...	...	1,367	...	1,367
12 " "	...	...	...	1,433	...	1,433

Experiments with sweet Potatoes

Name of Variety	Reduit Ks. per acre	Pamplémousses Ks. per acre	Mean Ks. per acre
No. 16	6,541	...	6,541
No. 5	5,892	...	5,892
Egyptian Plantation	5,862	...	5,862
No. 17	5,862	...	5,862
No. 18	5,352	...	5,352
No. 4	4,333	...	4,333
Pumpkin Yam	7,221	1,223	4,222
No. 15	4,163	...	4,163
Black Spanish	4,163	...	4,163
No. 13	3,823	...	3,823
No. 6	3,823	...	3,823
Southern Queen	6,541	1,087	3,814
Georgia Yam	5,692	1,903	3,797
Yoes	6,881	679	3,780
Red Bermuda	6,032	1,359	3,695
Spooner	4,333	2,446	3,389
Bourbon	5,012	1,223	3,117
Sealy's Seedling	5,522	679	3,100
Jaune	5,097	1,087	3,092
Jersey	3,483	2,582	3,032
Hen and Chickens	3,738	2,039	2,888
Elijah	2,973	2,718	2,845
Trinidad II... ..	4,163	1,495	2,829
No. 2	2,548	...	2,548
No. 7	2,548	...	2,548
Egyptian White	4,163	815	2,489
Florida	3,823	1,087	2,455
Pierson	3,653	1,223	2,438
Barbadoes Barrel	3,993	815	2,404
No. 3	2,378	...	2,378
No. 1	2,293	...	2,293
Chully	2,293	...	2,293
Gandia	1,699	2,854	2,276
Trinidad III	3,993	407	2,200
d'Arifat	3,823	407	2,115
Turkey class	3,823	407	2,115
Red Jersey	...	1,903	1,903
Trinidad IV	2,293	1,223	1,758
Trinidad I	3,143	135	1,639
Rouge	3,143	135	1,639
No. 14	1,444	...	1,444
Shangaii	1,784	1,087	1,435
Bigstain Jersey	...	1,223	1,223
Blanche	1,869	543	1,206
Egyptian Bebai	764	223	993
Violet	...	679	679
Raisin	...	135	135
Egyptian Iskandation	...	135	135

Planted July 1925—Reaped April—May 1926

Planted December 1925—Reaped May 1926

Experiments with Potatoes

Name of variety	Reduit Ks. per acre	Pamplémousses Ks. per acre	Mean Ks. per acre
<i>Treated with Bordeaux Mixture</i>			
Nothing	1,988	...	1,988
Sulphate of Ammonia	2,225	...	2,225
Nitrate of Potash	1,648	...	1,648
Superphosphate	1,834	...	1,834
Superphosphate and Nitrate of Potash	1,835	...	1,835
Super : N of Potash & Sulphate of Ammonia	2,208	...	2,208
<i>Without Bordeaux Mixture</i>			
Nothing	...	424	424
Sulphate of Ammonia	...	475	475
Nitrate of Potash	...	353	356
Superphosphate	...	441	441
Superphosphate and Nitrate of Potash	...	137	137
Super : N of Potash & Sulphate of Ammonia	...	577	577

Planted June
1926
Reaped Sept:
1926

APPENDIX III.

GOVERNMENT DAIRY—CUREPIPE—RETURN OF MILK YIELD DURING THE YEAR 1926.

Months	Carnation	Barkly	Aster	Larkspur	(Ternarium	Violet I	Clara	Rose	Cornflower	Hedda	Candos	Daffodil	Tulip	Poppy	Lobelia	Shamrock	Thistle	Cedara I	Cedara II	Cedara III	Eisenburg	Pretoria II	Pretoria I	Bortha	Jantzi	Solveig
January	278½	250½	213	279½	470	201	186	426	186½	21	225	503½	288½	63	229	314	98	262	157	...	141½	129½	192½	171	85	118
February	257	274	182½	242	395½	181	159	368	134½	...	190	180½	222	...	178	266½	5	240	121	...	48	159½	104½	158	51	93
March	251	270	197½	239½	405	201	154	392½	...	...	172	179½	231	...	193½	282½	138½	267½	...	...	139	156½	105	60½	...	...
April	217	219	98½	196½	328½	177	128½	307½	...	72½	155	155	186½	...	131	241	425	252½	108	...	316	69	76	died	...	...
May	177	died	...	92	326	156½	101	267	...	158	144½	120½	154½	...	51	226	428	222½	121	...	297½	57	...	165	...	...
June	211½	...	...	100	238	122½	88½	221	...	151	115½	15½	49	...	...	167	376½	67	37½	...	236½	441	...	342	...	...
July	209½	...	444	343	77	109	80½	died	...	160	117½	...	...	...	...	201	314	130	...	...	238	441	...	362½	...	...
August	209	...	479½	477½	157	108	73½	...	...	162½	126½	35	...	...	...	204	222	500½	...	...	250½	382	216	...	368	...
September	245	...	427	449	253½	85½	9	...	...	149	117½	577	227	...	...	178	228½	461	...	...	209	325½	242	...	345½	...
October	281	...	397	457	278	45½	...	...	...	148½	126½	654	227	...	...	179	212	400	...	...	147½	294	187	...	331	...
November	270	...	341	420	257½	7½	...	...	...	142½	107½	651	526	...	...	126½	176½	358	...	...	344	239½	125½	...	284	...
December	217½	...	93	378	256	...	82½	...	...	117½	21½	412½	530	...	...	16	139	337	...	...	167	224½	104½	...	141½	...
TOTAL	2,458	1,022½	2,873½	3,773	3,442½	1,395½	1,062½	1,982	321	1,282	1,620	3,056	2,415½	63	782½	2,321½	2,762	3,408½	663½	994	2,327	2,559½	1,330	395½	2,468½	211

APPENDIX III—(Continued)

Month	Hilda	Bet	Charlotte	Bianca	Narcissus II	Narcissus I	Nora	Eva	Violette II	Dahlia	Thora	Elisa	St. Pierre	Curepipe	B. Bassin	R. Hill	B. Belle	Souillac	Q. Bornes	Vacoas	Placq	Mahebourg	Princess III	Katrina	Daisy	Total
January	344½	269	130	291	174	75	484½	223	161	173	131½	48	...	...	...	...	...	...	...	...	...	...	...	...	...	7,525
February	309	257½	113	253	158½	58	397	360	222½	219	260½	404½	103½	97	88½	53½	127	58	111½	75½	75½	...	...	...	...	6,739
March	347	278	105½	248½	133	36	398½	421	241	255	260½	382	215	256	160	105	231	99½	250	333½	139	139	...	...	504½	8,011
April	321	238	5	231½	51	...	371	417	228	219½	260½	382	215	224	156	70	250	13½	260	212	125	73	68½	...	629	8,839
May	258½	197	...	224	...	...	377	329	220	229½	206	395	210	224	156	70	250	13½	236½	died	260½	...	...	...	511	6,130½
June	127	93½	...	179	91	...	316	310	204	179	180	360½	135	197½	114	died	200	...	236½	...	260½	47	...	...	528½	7,078
July	100½	211½	51	167½	145½	...	325	328	212½	128	183	366½	139½	204½	121½	...	242½	...	232½	...	279½	228½	...	...	514½	8,716
August	399½	276½	312½	114½	205	...	328	320½	222	74	161	377	79	238½	101	...	235	...	232½	...	251½	260½	...	...	455½	8,558
September	390½	262	279	130½	197	...	296	315	200	...	105	358½	...	191½	86	...	235	...	240	...	235½	287	...	...	464½	8,734½
October	385½	277	241	143½	199½	...	287	332	195	...	49	343½	...	171½	9½	...	217	...	240	...	235½	287	...	...	364½	7,833½
November	345½	308	200	53½	180	...	287	292	182	...	8	312	...	150	70½	...	198	...	died	...	204	265½	...	...	316½	7,373½
December	352	323½	188	...	177½	...	274	277	190	...	...	264½	257	149½	373½	...	181½	...	...	...	207½	265	...	...	33	7,373½
TOTAL	3,681½	2,986½	1,025½	2,064½	1,711½	169	4,141½	3,926	2,478½	1,477	1,511	3,617	1,138	1,883	1,280½	228½	2,118	171	1,803	546½	1,827	1,640½	68½	33	4,368	93,504½

APPENDIX IV

Distribution of Sugar Cane Diseases in Mauritius in 1926.

District	Gumming	Pine apple disease	Smut	Root Disease	Red Rot	Heart Rot	Collar Rot (suspected)	Bunch Top	Streak	
									on cane	on grasses
Flacq ...	Ten Estates Varieties attacked : White Tanna, M. 55, M. 87, M. 80, M. 33, M. 131, D. K. 74, R. P. 8, Louzier	Six Estates Varieties attacked numerous	One Estate Varieties attacked : M. K. 74, D. 131	None reported	Five Estates Varieties attacked D. K. 74, M. 131 R. P. 6, M. 55	None reported	None reported Variety	Three Estates attacked : White Tanna	Two estates Variety Setaria sp. RP 8	Nine estates species affected : Digitaria spp.
Rivière du Rempart	Two Estates Varieties attacked : White and Striped Tanna, M. 33.	One Estate Varieties numerous	Five Estates D. K. 74, White Tanna, Striped Tanna, R. P. 8	One Estate Variety attacked : D. 130	None reported	None reported	None reported	None reported	Four estates Variety attacked RP 8	Two estates Species affected : Setaria sp. Digitaria spp.
Pamplemousses	Three Estates Varieties attacked : M. 55, M. 87, M. 131	One Estate Varieties numerous	None reported	One Estate Variety attacked : D. 130	None reported	None reported	None reported	None reported	Two estates Variety attacked RP 8	Two estates Species affected : Cenchrus echinatus and 2 unknown
Grand Port	Nine Estates Varieties attacked : White Tanna, M. 55, Louzier, M. 87, M. 33, Port Mackay.	Three Estates Varieties : numerous	One estate Variety attacked : M. 131	None reported	Two Estates Varieties attacked : M. 33, D. K. 74, M. 131, M. 87	One Estate Varieties attacked : M. 55 & White Tanna	None reported	Two Estates Varieties attacked : White & Striped Tanna	None reported	Three estates Species affected : Setaria sp. Digitaria sp.
Savanne	One Estate Variety attacked : White Tanna.	One Estate Variety attacked : White Tanna	One Estate Variety attacked : M. K. 74	One Estate Variety attacked : D. K. 74	One Estate Variety attacked : D. K. 74	One Estate Varieties attacked : M. 55, M. 131, & White Tanna	None reported	None reported	Non reported	Two estates Species affected : Setaria sp. Digitaria sp.
Moka ...	Three Estates Variety attacked : White Tanna	None reported	None reported	None reported	None reported	None reported	None reported	None reported	None reported	one reported
Black River	Six Estates Varieties attacked : Port Mackay, M. 87, White Tanna, D. K. 74	Four Estates Varieties attacked : numerous	Five Estates Varieties attacked M. 55, D. K. 74, M. 131	One Estate Varieties attacked : various	One Estate Variety attacked : White Tanna	None reported	One Estate Variety attacked undetermined	None reported	None reported	Seven Estates Species affected : Setaria spp, Croix lachryma, Cenchrus echinatus Paspalum conjugatum, Digitaria marginata, D. Horizontalis.
Plaines Wilhems	Two estates Varieties attacked : White Tanna, M. 55,	One Estate Varieties attacked : numerous	One Estate Variety attacked M. 131	One Estate Varieties attacked : various	None reported	None reported	None reported	None reported	None reported	Three Estates Species affected : Setaria sp, Paspalum conjugatum, Digitaria marginata, D. horizontalis

APPENDIX V

ANNEXURE I

Manurial Experiment with Tobacco Central Experiment Station, Reduit

Variety	Plot Treatment	Area	Yield	Yield per acre dry leaf	Remarks
Sterling A	Lime 2 tons per acre	... 0.25	13.7	548	Farmyard manure applied throughout at the rate of 10 tons per acre.
	Lime as above	...	6.7	268	
	Nitrate of potash 100 lbs per acre	...			
	Supers 300 lbs per acre	...			
" C	Nitrate of Potash	... as above	8.5	340	
	Supers	...			
" D	...	...	8.5	340	
	...	...			
Joiner A	Lime 2 tons per acre	...	10.5	420	
	Lime as above	...	5.2	208	
" C	Nitrate of potash 100 lbs per acre	...			
	Supers 300 lbs per acre	...			
" C	Nitrate of potash	... as above	7.7	308	
	Supers	...			
" D	...	...	7.0	280	

Variety trials, Royal Gardens, Pamplémousses

		acre	Kilos	Kilos	
Blue (local seed)	Pen manure 12 tons per acre	115	35.75	308.9	} Fire cured
„ (Bourbon „)	„ „ „	„	30.55	206.04	
Yellow Pryor	„ „ „	„	25.33	218.65	
Sterling	„ „ „	„	23.64	204.35	
Joiner	„ „ „	.086	10.65	91.59	

Analysis of leaves from Tobacco experiments.

Variety	Plot treatment	LEAF ANALYSIS					ASH ANALYSIS					Remarks
		Resins and Fats	Albuminoids	Nicotine	Ash including SO ₂ and CO ₂	Silica	Chlorine	Sulphates	Magnesium	Lime	Potash	
Sterling	Plot A	2.78	19.94	3.19	23.93	.16	11.19	2.94	12.34	23.97	22.69	
„	„ B	2.71	23.66	3.34	21.04	.25	12.42	3.10	12.40	24.30	22.45	
„	„ C	2.43	27.7	3.52	18.97	.13	14.5	3.10	14.16	26.41	21.49	
„	„ D	3.43	21.1	3.60	20.98	.36	13.85	3.15	11.74	26.07	22.87	
Joiner	„ A	3.52	24.93	4.05	21.78	.15	11.64	4.11	9.09	24.02	25.99	
„	„ B	3.13	23.9	2.83	21.13	.18	10.16	3.44	12.89	26.64	20.02	
„	„ C	2.89	21.18	2.76	22.55	.14	11.75	3.46	10.65	23.54	25.42	
„	„ D	2.93	24.05	3.78	22.05	.14	12.61	3.66	9.51	24.04	21.71	

ANNEXURE II

Variety trials, Royal Botanical Gardens, Pamplémousses.

Variety	Plot treatment	Area	Yield	Yield per acre	Remarks
		sq. yards.	kilos	kilos	
Gold Leaf	Pen manure 10 tons per acre	308	14.75	231.76	This plot planted 3' x 3'
„ „	„ „ „	„	16.05	251.68	„ „ 3' x 2'
Blue Pryor	„ „ „	616	34.60	272.25	„ „ 3' x 3'
R.R.R. Burley...	„ „ „	1/44th	13.2	580.8	„ „ 3' x 1½'

ANNEXURE III

Statement of Accounts for year 1926.—Government Tobacco Factory

	Rs.	c		Rs.	cs.
Stock on hand on 31.12 25	17,822	25	Sales ..	29,199	21
Salaries	2,070	...	Kiosk profit	101	66
Wages	2,789	82	Stock on hand on 31.12.26	16,687	25
Fuel	394	45			
General Expenses	652	36			
Purchases	14,707	89			
Balance being nett profit	7,551	35			
	Rs. 45,988	12			

The total sales from the Factory and Kiosk were as follows :

	Factory	Kiosk
Tobacco large packets 250 grams	5,555	819
„ small „ 125 „	26,249	1,413
„ „ 100 „	1,900	64
Tins of Dodo Cigarettes	2,890	497
Packets of Dodo cigarettes	129	70
Tins of Dodo “B” cigarettes	1,801	1,708
Dust	Ks. 1,928	...
Midribs	1,218.5	...
Inferior leaves	395.83	...

